

ELECTRICIANDefinition:

Under general direction, install, service and maintain electrical/electronic systems and equipment in various Agency treatment plants, pumping stations, pressure reducing stations, wells, storage tanks and Agency offices. The work involves the performance of skilled tasks in accordance with standard trade practices in the installation, alteration, maintenance and repair of electrical/electronic systems, and equipment. Assignments are made in the form of written or oral instructions and may be accompanied by sketches and/or blueprints. Work is ordinarily performed independently and subject to inspection in process or upon completion.

Distinguishing Characteristics:

This is a skilled, journey level, single classification, non-exempt position that is responsible for and requires specialized training in electrical design, installation, troubleshooting, maintenance and repair work. The work requires independent judgment, initiative and action within established operational parameters. The duties require travel to various remote sites in Placer County, including work outside in all types of weather as well as inside with prolonged periods of sitting; regularly walking on uneven surfaces which may be slippery or wet, bending, stooping, reaching lifting and carrying 50 lbs., ability to discern colors and focus sight close and distant and ability to do fine manipulation of small controls. Operates a vehicle on a regular basis.

Examples of Duties:

- installs conduit, transformers, wire, pull boxes, switchboards, and switches;
- services, repairs and maintains pumps and motors, including industrial motor controls and control circuits, and various other types of electrical equipment and apparatus;
- repairs and/or replaces broken or defective parts in motors, generators, pumps, storage batteries, switchgear, controllers, contactors, switches, uninterruptible power supplies, and other fixtures and appliances;
- tests, locates, and repairs trouble in electrical circuits and equipment including high voltage (12VDC to 4160VAC) distribution systems;
- performs limited troubleshooting, repair, and modifications to PLC hardware and software;
- troubleshoots electrical and electronic equipment, including HVAC equipment;
- installs and maintains electrical instrumentation equipment;
- installs, troubleshoots, maintains, and repairs uninterruptible power supply (UPS) systems and emergency backup systems;
- prepares purchase orders, and purchases parts and equipment;
- reads and interprets blueprints and schematics;

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- performs electrical inspections and creates punch list for new city facilities;
- reviews project documents and drawings prior to construction and inspects the work of electrical contractors to ensure conformance with plans and specifications;
- compiles materials list;
- may supervise the work of helpers.

Qualifications:

Knowledge of:

- the theory of electricity, of standard practices, tools, materials and equipment of the electrical trade;
- occupational hazards and safety precautions of the trade;
- local and national electrical codes;
- installation, operation and maintenance of electrical/electronic equipment, apparatus, and instruments from 12VDC to 4160 VAC;
- laws, rules and standards pertaining to electrical construction and maintenance, and of the hazards involving in working around energized lines and equipment;
- standard safety practices as prescribed by the California Occupational Safety and Health Act and the California Division of Industrial Safety.

Ability to:

- understand and follow oral and written instructions and to read and interpret blueprints, sketches, and diagrams of electrical circuits;
- plan electrical wiring systems;
- compile material lists;
- modify drawings to current "as built" status;
- submit as-builts for modification and updating by computer assisted drawing;
- communicate orally and in writing clearly and effectively;
- work independently;
- analyze problems and develop practical solutions;
- organize and prioritize work to handle multiple projects simultaneously;
- follow oral and written instructions;
- establish and maintain effective working relationships with those contacted in the course of work;
- locate, adjust, and repair defects in electrical systems and equipment;

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- install, maintain, troubleshoot, and repair a wide variety of electrical and solid state electronic equipment used in power transfer and industrial process control for water treatment, distribution;
- read and interpret wiring diagrams and specifications;
- make estimates of labor and materials;
- use and care for tools and equipment of the electrical trade;
- use personal computers and typical office software;
- operate a motor vehicle safely.

Education/Experience:

Sufficient education, training and experience to demonstrate the knowledge, skill and abilities listed above. These would normally be acquired with two years experience as a journeyman electrician, including experience with power generating equipment (high voltage distribution systems, motor controls and control circuits). Journey level is the completion of a recognized apprenticeship (State of California Department of Industrial Relations, Certificate of Completion of the Electrician Apprenticeship or the International Brotherhood of Electrical Workers Apprenticeship Certificate).

License/Certificates:

Must possess and maintain a valid California driver's license with an acceptable driving record.