



## Electrician Series

Classification Title	Class Codes	Date Established	Date Revised
Electrician	6533	1931	09-03-03
Lead Electrician	6532	12-19-58	09-03-03
Supervising Electrician	6534	10-01-71	09-03-03

### OVERVIEW:

Electricians as defined in this series are journey-level skilled trades workers responsible for the full range of skilled electrical work including the installation, maintenance, modification and repair of electrical apparatuses, equipment and systems. Incumbents inspect, isolate, troubleshoot and repair electrical malfunctions using various test instruments; operate electrical power-generating plants and other electrical equipment and systems; maintain and repair low voltage systems including fire, alarm and access systems; test electrical equipment for safety and efficiency; plan the layout and wiring of new or remodeled installations; fabricate electrical parts; perform incidental welding as necessary to complete electrical work; advise in the selection and storage of electrical equipment; inspect completed work for conformance with specifications, requirements and compliance with applicable building and safety codes and regulations; inspect related work performed by contractors; estimate cost, time and materials for electrical projects; participate in the maintenance and operations of an electrical shop; clean, maintain and service tools and equipment used in the performance of duties; perform all work in accordance with established safety procedures; maintain a safe and clean work environment; maintain records and retrieve data related to work performed using manual and/or computerized record-keeping systems; prepare standard reports; and consult and work with other trades workers. Work may involve exposure to hazardous materials. Incumbents typically hold a license or applicable certification.

Three progressive classifications are defined within this series, each performing the full range of skilled electrical work; however, the supervisory, project planning and coordination responsibilities vary depending on the classification. Examples of typical activities are not meant to be all inclusive or restrictive; incumbents may perform related work activities.

### ELECTRICIAN

Under general supervision, incumbents in this classification perform the full range of skilled journey-level electrical and related work as outlined in the series overview. Incumbents in this classification also may provide instruction and lead direction to unskilled and semi-skilled assistants.

### TYPICAL QUALIFICATIONS:

**Knowledge:** Work requires thorough knowledge of electrical theory and the methods, materials, tools and equipment used in the electrical trade for the installation, maintenance and repair of electrical apparatuses, equipment and systems; and a thorough knowledge of applicable state and federal codes and regulations pertaining to the electrical trade, including the National Electric Code and Electrical Safety Orders of the Division of Industrial Safety of the State of California.

**Abilities:** Must be able to assemble, install, maintain and repair electrical apparatuses; operate all applicable tools and equipment necessary to perform skilled electrical work; read, interpret and work from blueprints, plans, drawings and specifications; make rough sketches; estimate the cost, time and materials of electrical work; maintain records and retrieve data related to work performed using manual and computerized record-keeping systems; prepare standard reports; provide instruction to unskilled and semi-skilled assistants; analyze and respond appropriately to emergency situations; read and write at a level appropriate to the position; and perform arithmetic calculations as required by the position. Incumbents may be required to possess a California Driver's License valid for the operation of any vehicle or equipment they are required to maintain and operate.

**Experience:** These abilities normally would be acquired through any combination of progressively responsible training and experience which demonstrates achievement of journey-level skills equivalent to that acquired through completion of a standard electrician's apprenticeship program.

## LEAD ELECTRICIAN

Under general supervision, the Lead Electrician works with and is in charge of a small group or crew of skilled Electricians and semi-skilled assistants involved in completing the work outlined in the series overview. The work of the Lead Electrician is distinguished from the Electrician by the additional responsibilities of providing lead work direction to several journey-level crafts workers and semi-skilled assistants, laying out and coordinating the work flow for jobs, and preparing materials lists and ordering supplies for jobs. Unlike the Supervising Electrician, the Lead Electrician spends the majority of time working as a skilled electrician, but has ancillary lead work and project planning responsibilities.

Incumbents typically lay out, direct, and assist with the full range of skilled electrical work outlined in the series overview; supervise, instruct and work with a small group or crew of Electricians and assistants; instruct others in safety rules and ensure that they are observed; select and prepare lists of materials for jobs; maintain stock and materials in the warehouse; inspect electrical work to ensure it meets quality requirements and specifications; draw diagrams and sketches of work to be performed; maintain manual and/or computerized work records and maintenance management systems; prepare manual and/or computerized reports; and may supervise the maintenance of an electrical shop. On specific projects, may coordinate the work of other skilled crafts workers.

### TYPICAL QUALIFICATIONS:

**Knowledge:** In addition to the knowledge required of the Electrician, the Lead Electrician must possess a working knowledge of effective supervisory practices and techniques.

**Abilities:** In addition to the abilities required of the Electrician, the Lead Electrician must be able to lead, instruct and coordinate the work of a small group or crew of skilled and semi-skilled workers; accurately estimate costs, supplies and materials needed for jobs; prepare lists of materials; ensure work is performed in sequence; maintain records; and prepare more complex reports.

**Experience:** In addition to the experience required of the Electrician, the abilities of a Lead Electrician normally would be acquired through one to two years of experience as a journey-level electrician that included work coordination responsibilities

## SUPERVISING ELECTRICIAN

Under general supervision, the Supervising Electrician primarily is responsible for supervising and working with one or more groups or crews of skilled journey-level electricians and their semi-skilled assistants in the performance of general electrical maintenance work outlined in the series overview. The Supervising Electrician is distinguished from the Lead Electrician by the scope of supervisory, project planning and coordination duties as well as the greater amount of time devoted to these activities.

Incumbents typically prioritize and coordinate the work of multiple crews or projects; assign work to qualified crew members; provide work and safety instructions; provide on-the-job training and instructions to less skilled workers in trade and safety practices; provide input on performance evaluations; monitor work in progress; inspect completed work to ensure it is in compliance with specifications, special instructions and sound trade practices; develop and maintain manual and/or computerized work record-keeping and/or maintenance management systems; prepare reports; and oversee an electrical shop.

Work on new construction and remodels requires: collaborating with engineering and design departments; interpreting complicated plans and drawings; coordinating work schedules and work assignments to meet the overall construction/modification objectives; sequencing of work; ensuring the availability of required materials and equipment; analyzing operations; preparing cost and time estimates; and providing a high level of inspection to ensure appropriate building and safety codes are met. Incumbents also may design minor tenant improvements and coordinate and supervise the work of related trades workers on specific projects.

### **TYPICAL QUALIFICATIONS:**

**Knowledge:** In addition to the knowledge required of the Lead Electrician, the Supervising Electrician must possess a more thorough knowledge of effective supervisory practices and techniques and a working knowledge of job design and work sequencing related to construction projects.

**Abilities:** In addition to the abilities required of the Lead Electrician, the Supervising Electrician must be able to plan and direct the work of skilled crafts workers and their semi-skilled assistants; determine and coordinate staffing, material and equipment needs for multiple jobs and projects; ensure accuracy and maintenance of assigned record-keeping systems; and perform basic design work for electrical systems.

**Experience:** In addition to the experience required of the Lead Electrician, the abilities of the Supervising Electrician normally would be acquired through two or more years of experience as a journey-level electrician, including one to two years in a lead/supervisory capacity.