

**POSITION DUTY STATEMENT**

PM-0924 (REV 7/2014)

CLASSIFICATION TITLE <b>CALTRANS ELECTRICIAN I</b>	OFFICE/BRANCH/SECTION <b>07/MAINTENANCE/SPECIAL CREWS/PUMP CREW</b>	
WORKING TITLE <b>CALTRANS ELECTRICIAN I</b>	POSITION NUMBER <b>907-740-6938</b>	EFFECTIVE DATE

As a valued member of the Caltrans team, you make it possible for the Department to provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability. Caltrans is a performance-driven, transparent, and accountable organization that values its people, resources and partners, and meets new challenges through leadership, innovation and teamwork.

**GENERAL STATEMENT:**

The Caltrans Electrician I receives general direction on policies and procedures from the Caltrans Electrical Superintendent and general supervision from the Caltrans Electrical Supervisor and/or from an Electrician II lead person. The position is responsible for the Levels of Service on Electrical inventory items in the Pump Electrical Cost Center in District 7. Follows safety and health policies and procedures as contained in the Department's Injury and Illness Prevention Program; has knowledge of environmental, storm water, emergencies, natural disasters, accident prevention techniques, and safe work practices. May work for other Supervisors and/or work units as required by operational needs. Must follow and enforce California Occupational Safety and Health Administration (CAL/OSHA) and safety rules and regulations; the National Electric Code and the District Maintenance Code of Safe Practices. May receive training from other employees of the crew, region, district, or headquarters. Is responsible for the proper maintenance/operation of assigned equipment. Operates equipment used by the assigned unit that requires a class B commercial driver's license.

**TYPICAL DUTIES:**

Percentage	Essential (E)/Marginal (M) <sup>1</sup>	Job Description
30%	E	Works as part of a crew or works independently to install, repair, maintain, and check booster pumps, electricity provided for irrigation circuits, highway lighting, illuminated signs, bridges, public service facilities, navigational aids, subway pumping plants, surveillance stations, irrigation systems, tunnel lighting, truck weigh stations, park and rides, motors, building lighting, heating and air conditioning systems, including the wiring, conduits, pull boxes, poles, heads, controllers, and knockdowns.
30%	E	Works closely with Caltrans Electrician II in support of the Electrical Pump Crew duties. Makes checks of problem areas with irrigation and booster pumps and highway lighting systems to locate trouble or cause of failure and inspects and tests both irrigation service locations and lighting systems for proper functioning.
15%	E	Reponds to electrical emergencies, evaluates the situation, and takes appropriate action.
15%	E	Makes daily work reports and keeps and maintains simple records. Makes drawings of schematics, wiring diagrams, intersections, phase-diagrams, and corrections of them. Assists with ordering and/or picking up supplies and equipment.
10%	M	May inspect for proper electrical operation and installation of contracts and permits for compliance with Standard Plans and Specifications.

<sup>1</sup>ESSENTIAL FUNCTIONS are the core duties of the position that cannot be reassigned.

MARGINAL FUNCTIONS are the minor tasks of the position that can be assigned to others.

**SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS**

The incumbent does not supervise others.

**KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS**

A high degree of analytical ability is required. Must be able to quickly locate cause or failure in electrical equipment and devise repairs promptly, must establish and conduct preventative maintenance program on equipment assigned for maintenance. Must be able to determine when to request assistance. Must have strong knowledge of electrical theory and practice, including power, lighting and control circuits; materials, methods, and equipment used in the installation, maintenance, and repair of electric and electronic devices. This pertains particularly to the repair of highway lighting, ramp metering, surveillance stations, and bridge electrical systems. Must have knowledge of methods, materials, and

## POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

---

equipment used in electrical repair and knowledge of less complex electronics as applied to various electrical control and measuring devices, must have knowledge of the Electrical Safety Orders of the Division of Industrial Safety and of the safety precautions required in the installation of traffic control devices. Must have the ability to keep accurate written reports. Must be able to communicate well in writing, by telephone, and by two-way radio. Must have ability to read and interpret plans, detail drawings, and wiring diagrams.

Must know and understand the provisions of the California Vehicle Code as it pertains to the loading and operation of motor vehicles and rules and regulations pertaining to highway maintenance practices. Must have the ability to work safely around high-density traffic and at various heights above traffic. Must have the ability to work effectively alone or with others.

---

### RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Errors may expose the incumbent, co-workers, and/or the public to possible injury or loss of life. Errors may also cause an inefficient use of time and tax dollars through extra expense in the maintenance of highways, or damage to State equipment and facilities. Errors may expose the State to liability for damages to public property and cause delays in project delivery.

---

### PUBLIC AND INTERNAL CONTACTS

Must maintain good relations with the public, other Caltrans employees, and employees/representatives of other government agencies. May have daily contact with other public agencies and private individuals in the course of the assignment. When in contact with a hostile person, must maintain a favorable public image for the Department and the State.

---

### PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Much of this position is labor intensive. Must have physical ability to react quickly to errant motorists and do strenuous hand and mechanical labor. Must be able to interact well with employees and individuals from many different cultural backgrounds.

Note: For standing, walking and sitting, along with several other activities, typical duties are used as examples in various situations to give ranges for the activities. Generally, activities can be broken down into operating equipment 30% of the time on a year-round basis. The remainder of the activity is labor intensive and includes but is not limited to the following:

Standing, Sitting, and Walking is described to equal 100% of the work time for a given period such as a work shift.

Lifting (floor to bench to floor) – Items up to 75 pounds may be lifted 1% of the time. Other lighter lifting includes lifting of materials in and out of equipment, ladders, 170 controllers, signal heads, street light luminaries, poles, digging trench. (10%)

Transport and/or carry – materials which may weigh 5 to 100 pounds must be transported and/or carried from storage areas to vehicles and from vehicles to job sites which may be on uneven terrain. Tools are transported and/or carried from a few feet to 100 yards and weigh from a few ounces to 50 pounds each. Tools may be transported and/or carried on uneven terrain. (15%)

Overhead reaching – Overhead work includes but is not limited to pulling self up into many types of equipment, adjusting luminaries, installing lamps, adjusting Traffic Signal Heads, and loading material into/onto equipment. (15%)

Other Reaching – Includes but is not limited to setting cones, lubing and checking equipment, graffiti removal, shoveling, driving, shifting, sitting signs, picking up cones, re-lamping, using hand tools, working with conduit and wire, working in cabinets. (50%)

Pushing/Pulling – Includes but is not limited to setting poles, pulling wire, tightening and loosening nuts on bolts. (40%)

Twisting - Twists while driving equipment and does so on a continuous basis, especially while backing up or turning around while operating a pilot car. Other twisting includes but is not limited to shoveling, setting down and picking up traffic cones, working in buckets. (15%)

Climbing/Balancing – In and out of equipment, up and down banks/slopes, up and down and standing on ladders, hoist buckets, stairways (often with material or supplies); onto steps, walkways, and signs. (15%)

# POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

---

Bending/Crouching/Squatting/Crawling – Often bends continuously throughout the day while operating equipment and performing physical labor. All of these activities are necessary when checking such things like pull boxes, cabinets, picking up and laying down tools and material. Also crawls around and underneath equipment while checking and servicing equipment.

Simple Grasping – This activity is necessary about 95% of the shift while climbing in/out and around equipment, operating equipment, using hand tools, meters, and handling materials.

Fine Manipulation – This occurs less than 5% of the shift and usually is done while writing reports or manipulating controller keypad, knobs and levers on equipment.

Importance of hearing and sight – These both are essential in order to work safely on the job due to the close proximity of fast moving traffic or large equipment. It will be necessary for some night work and the incumbent must have adequate night vision to be able to perform work safely.

Hearing should be adequate with or without hearing aid to hear warning devices used for worker safety (i.e., look out alarm devices, including vehicle horns used to warn employees of eminent danger at the work site) as per Chapter 13 of the Caltrans Injury Illness Prevention Program Safety Manual.

Height – Works on signs and on other structures, or in a hoist bucket from a height of over 45 feet.

---

## WORK ENVIRONMENT

Required to work in a wide range of sometimes extreme conditions including heat up to 120 degrees, cold to 30 degrees, strong winds, rain, dust, with noise, and on uneven surfaces.

Normal work week is 5/40, Monday through Friday from 0700 to 1530 hours. The scheduling of the 5/40 days is at the discretion of Region Management. May be scheduled to work weekends and/or night shift as needed to meet operational needs with proper advance notice.

May be requested to work overtime due to emergencies, special work projects, or when the Department deems that it is in the best interest of the State to work overtime with proper advance notice.

Personal safety requirements include but are not limited to (as per Injury and Illness Prevention Program):

- A. Appropriate footwear, in good and sturdy condition, must be worn.
  - B. Either long or short sleeve shirts provided by Caltrans, or a safety vest is to be worn over non-safety shirts or coats.
  - C. Long pants. No shorts or cutoffs.
- 

I have read, understand and can perform the duties listed above. (If you believe you may require reasonable accommodation, please discuss this with your hiring supervisor. If you are unsure whether you require reasonable accommodation, inform the hiring supervisor who will discuss your concerns with the Reasonable Accommodation Coordinator.)

---

EMPLOYEE (Print)

---

EMPLOYEE (Signature)

DATE

---

I have discussed the duties with, and provided a copy of this duty statement to the employee named above.

---

SUPERVISOR (Print)

---

# POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

---

SUPERVISOR (Signature)

DATE

---