STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE	OFFICE/BRANCH/SECTION	
CT Electrician I	District 7/Maintenance/Electrical Region	
WORKING TITLE	POSITION NUMBER	REVISION DATE
Caltrans Electrician I, Night crew	907-750-6938-XXX	02/06/2025

As a valued member of the Caltrans team, you make it possible to improve lives and communities through transportation.

GENERAL STATEMENT:

Under general direction from the Caltrans Electrical Superintendent and general supervision from the Caltrans Electrical Supervisor and/or from an Electrician II lead person, the incumbent is responsible for the Levels of Service on Electrical inventory items in the District. Follows safety and health policies and procedures as contained in the Department's Injury and Illness Prevention Program; knowledge of environmental, stormwater, emergencies, natural disasters, accident prevention techniques, and safe work practices. There are times when the incumbent may work for other supervisors and/or work units, as required by operational needs. Follows CAL/OSHA and safety rules and regulations; the National Electric Code and the District Maintenance Code of Safe Practices. Employee may receive training from other employees of the crew, region, district or headquarters. The incumbent is responsible for the proper maintenance/operation of assigned equipment. Must possess a valid C driver's license to operate State vehicles; Commercial Class A or Class B driver's license is desirable.

CORE COMPETENCIES:

As a CT Electrician I, the incumbent is expected to become proficient in the following competencies as described below in order to successfully perform the essential functions of the job, while adhering to and promoting the Department's Mission, Vision, Values, Strategic Imperatives and Goals. Effective development of the identified Core Competencies fosters the advancement of the following Leadership Competencies: Change Commitment, Risk Appetite, Self-Development/Growth, Conflict Management, Relationship Building, Organizational Awareness, Communication, Strategic Perspective, and Results Driven.

- **Flexibility and Managing Uncertainty :** Adjusts thinking and behavior in order to adapt to changes in the job and work environment. (Safety, Employee Excellence - Innovation, Stewardship)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Safety, Employee Excellence - Integrity, Stewardship)
- **Continuous Professional Development:** Seeks to obtain knowledge and improve performance while supporting others in doing the same. (Safety, Employee Excellence - Collaboration, Pride)
- **Problem-solving and Decision-making :** Identifies problems and uses logical analysis to find information, understand causes, and evaluate and select or recommend best possible courses of action. (Safety - Collaboration, Innovation, Pride)
- **Teamwork/Partnership:** Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Equity, Employee Excellence - Collaboration, Equity, People First)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Equity - Collaboration, Equity, People First)
- **Communication:** Expresses oneself clearly in all forms of communication. Gives feedback and is receptive to feedback received. Knows that listening is essential. Keeps others in the Division and other functional units informed as appropriate. (Safety, Employee Excellence - Collaboration, People First, Stewardship)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Safety, Employee Excellence - Innovation, Integrity, Stewardship)
- **Technical Expertise:** Depth of knowledge and skill in a technical area. (Safety, Employee Excellence - Innovation, Pride, Stewardship)

TYPICAL DUTIES:

Percentage	Essential (E)/Marginal (M)[1]	Job Description
35%	E	Works as part of a crew or works independently to install, repair, maintain, and check traffic signals, highway lighting, illuminated signs, flashers, navigational aids, pumping plants, surveillance stations, irrigation controllers, tunnel lighting, ramp metering, changeable message signs, closed circuit TV, 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.

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30%	E	Operates equipment used by the assigned unit. Makes minor repairs, adjustments, emergency repairs; performs lights and lube inspections; cleans equipment and maintains all pertinent records. Pre and post operative equipment checks.
15%	E	Makes detailed checks, inspections, and repairs of a wide variety of electrical equipment to locate trouble or cause of failure and complete repairs such as correcting software entries, replacing spare parts, wiring, or installing replacements to accident damage.
10%	E	Responds to electrical emergencies, such as light pole knockdowns, open enclosures with exposed wires, traffic signals on flash, etc; Evaluates situations and takes appropriate action. Elaborates reports of location, response time, damage, materials needed for repairs, potential traffic control, etc.
10%	E	Makes daily reports associated with work orders that include asset information, location, travel miles and time, materials used, etc. Keeps and maintains simple records. Makes drawings, schematics, wiring diagrams, intersections, phase-diagrams, and corrections of them. May order and/or pick up supplies and equipment. May inspect for proper electrical operation and installation of contracts and permits for compliance with Standard Plans and Specifications.

[1]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

No direct supervision. The Caltrans Electrician I (CEI) may at any time be placed in charge of a work crew as the responsible person in charge, as per Chapter 8, Maintenance Manual, Volume I over other Caltrans workers. He/she is responsible for carrying out the work that is necessary for the efficient use of personnel and equipment while working alone or part of a crew that may consist of a couple of Electrician I's (One designated in charge), Caltrans Electrical Technicians, or Electrical Trainees.

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, and conduct preventive maintenance checks on electrical assets. Must be able to determine when to require assistance. The person 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. Methods, materials, and equipment used in electrical repair and less complex electronics as applied to various electrical control and measuring devices; and the Electrical Safety Orders of the Division of Industrial Safety and of the safety precautions required in the installation of traffic control devices. Ability to keep accurate written reports. Must be able to communicate well in writing, by telephone and two-way radio. Ability to read and interpret plans, detail drawings and wiring diagrams.

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

Error may expose him/her and/or co-workers and/or the public to possible injury or loss of life. Error 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. Error may expose the State to liability for damages to public property and delay in project delivery.

PUBLIC AND INTERNAL CONTACTS

Maintain good relations with the public, Caltrans employees and employees/representatives of other government agencies. May have daily contact with other public agencies and private individuals. When in contact with a hostile person, the incumbent is expected to maintain a favorable public image for the Department and the State.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

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

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-around basis.

The remainder of the activity is labor intensive and includes but is not limited to the following:

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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 lbs may be lifted 1% of the time. Other lighter lifting includes lifting of materials in and out of equipment, ladders, traffic controllers, signal heads, street light luminaries, small poles, digging trench. (10%)

Transport and/or carry – materials, which may weigh 5 to 100 lbs., 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 a few feet to 100 yards and weigh a few ounces to 50 lbs. each. Tools may be transported and/or carried on uneven terrain. (15%)

Overhead Reaching – Overhead work includes but not limited to pulling yourself up into many types of equipment, adjusting/ replacing luminaries, installing lamps, adjusting traffic signal heads, and loading material into/on equipment. (15%)

Other Reaching – Includes but not limited to setting/retrieving cones, lubing and checking equipment, graffiti removal, shoveling, driving, shifting, setting signs, re-lamping, using hand tools, working with conduit and wire, working in cabinets, 50% of work shift.

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

Twisting – The CEI twists while driving equipment and does so on a continuous basis, especially while backing up or turning around while operating a vehicle. Other twisting includes but is not limited to, shoveling, setting/picking up traffic cones, working in buckets. (15%)

Climbing/Balancing – Is done 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%)

Bending/Crouching/Squatting/Crawling – The employee 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. The employee also crawls around and underneath equipment while checking and servicing equipment.

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

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

Hearing and Sight – Essential in order to work safely on the job because of how close the incumbent will be working next to fast moving traffic or large equipment. Incumbent must have adequate night vision to be able to perform work safely.

Hearing should be adequate with or without a hearing aid to hear warning devices used for worker safety such as look out alarm devices including vehicle horns used to warn employees of eminent danger at the work site (per Caltrans Safety Manual).

Height – Works on signs and other structures and/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, noise and uneven surfaces.

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.

Employees are expected to report to work reasonably dressed to protect themselves and during routine assignments and from exposure to usual and/or predictable physical and environmental conditions found in the workplace (per Caltrans Safety Manual).

Personal safety requirements include but are not limited to:
A. Appropriate footwear, in adequate condition.
B. Long or short sleeve shirts provided by Caltrans. Safety vest is to be worn over non-safety shirts or coats.
C. Long pants; no shorts or cutoffs.
D. Safety gear such as: hard hat, safety glasses, hearing protection devices, FR rated clothing, face shields, gloves, respirator, chaps, and/or other safety gear.
E. Reflective vest worn over white coveralls, as needed, such as for night work.

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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.)

I agree that by providing my electronic signature for this form, I agree to conduct business transactions by electronic means and that my electronic signature is the legal binding equivalent to my handwritten signature. I hereby agree that my electronic signature represents my execution or authentication of this form, and my intent to be bound by it.

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)	
SUPERVISOR (Signature)	DATE

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