

**AIRPORTS ELECTRICIAN****DEFINITION**

Under general supervision, performs skilled work installing, altering, maintaining and repairing electrical systems, equipment, and fixtures owned by the City of Fresno.

**SUPERVISION RECEIVED/EXERCISED**

No supervision exercised. Receives supervision from assigned supervisor.

**DISTINGUISHING CHARACTERISTICS**

Airports Electrician is a skilled trades class specific to the Airports Department. Incumbents are responsible for performing tasks in compliance with FAA Regulations as well as communicating with multiple agencies during the course of their duties with an emphasis on preventative maintenance. Airports Electrician is distinguished from the Electrician position in that the latter do not perform work in an active airfield environment requiring strict communications protocols with Air Traffic Control. The Airports Electrician differs from the Industrial Electrician in that the latter installs, repairs, and maintains 15KV (kilovolts) electrical components for large rotating equipment above 200 HP including associated motor control centers, PLC, VFD equipment.

**EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES**

*may include, but not limited to, the following:*

Inspects, installs and repairs conduits, wires, pull boxes, switchboards, and switches required for additions, extensions, or alterations to electrical systems; identifies safe electrical solutions, documents any changes made to electrical systems and advises other staff as needed.

Works closely with Airport staff to ensure that safety practices and standards are enforced; advises Airport Maintenance Manager, Supervisors, and Engineers in all electrical matters.

Services, repairs, and maintains lighting, power, heating, and electronic fire alarm systems.

Installs, services, repairs, maintains, and overhauls electromechanical and solid state electronic traffic signal controllers and associated electronic equipment.

Repairs and replaces defective parts in motors, generators, pumps, storage batteries, switchboards, controllers, contactors, switches, and other fixtures and appliances.

Tests, locates, and repairs trouble in electrical circuits and equipment.

Uses aerial boom for overhead work; repairs and replaces damaged electroliers, fire alarm boxes, and junction boxes; replaces defective overhead and underground cables or other electrical facilities.

Installs, programs, calibrates, maintains, and repairs electronic analog and digital type equipment including programmable logic controllers, variable frequency motor drives, and process instrumentation and control equipment, including fiber optic systems.

Inspects Airport mechanical, electrical, and airfield equipment and facilities at regular and periodic intervals to ensure proper preventative maintenance and standards and Federal Aviation Administration (FAA) Regulations are met.

Performs inspections, maintenance, and calibration of sensitive electrical and electronic equipment that supports aviation and personal safety of aircraft in the airfield approach and landing environment to meet FAA standards.

Participates in the design and planning of electrical projects to include plan development, permit application, design and installation of electrical and electronic systems; and may be required to design and implement systems without more than a need statement.

Continually review Airfield and Landside electric devices, electronic systems, and future requirements in an effort to design, redesign, evaluate technical adequacy, associated with devices that support aircraft flight safety operations in the airport environment.

Performs related duties as required.

## **JOB RELATED AND ESSENTIAL QUALIFICATIONS**

### **Knowledge of:**

The standard practices, materials, tools, and equipment of the electrical trade.

High voltage service and related equipment up to and including 15 kilovolts.

Occupational hazards and safety precautions of the trade.

Local and national electrical codes.

Solid state electronic systems, including programmable logic controllers, process instrumentation and control equipment.

Solid state motor controllers and variable frequency drives.

Safety principles and practices for electrical voltages, mechanical and environmental hazards.

Safety procedures for construction and road/airfield maintenance, or other heavy industrial areas.

**Ability to:**

Read and interpret blueprints, sketches, and diagrams.

Establish and maintain effective working relationships with those contacted in the performance of duties.

Safely operate a motor vehicle.

Follow directions given over radio, orally, or in writing.

Professionally interact with airport staff, users, and tenants.

Learn and apply safety rules and radio protocol for the facility.

Work independently and in a team environment.

Effectively communicate with other airport employees and Air Traffic Control Center utilizing multiple radios.

Work independently in a very busy, demanding airfield environment under sometimes challenging conditions.

Perform various assignments safely at varying heights.

Safely operate articulating lifts as well as other power or hand tools and equipment.

**Skill in:**

Locating and repairing defects in electrical systems and equipment.

Trouble shooting and the repair of electronic analog and digital type control equipment.

The use and care of tools and equipment of the electrical trade.

Strength and agility to perform arduous outdoor work.

Providing effective customer service to internal and external customers.

Reading, interpreting, maintaining and repairing a variety of instrumentation.

Performing correct mathematical calculations for electrical loads, voltages and currents.

Operating a variety of computer programs using a Microsoft Windows environment.

**MINIMUM QUALIFICATIONS**

Completion of a State of California approved 60 month electrical apprenticeship program, or equivalent\*

AND

Two (2) years experience as a journey-level Electrician in an industrial setting performing troubleshooting, repair, and installation of a wide variety of electrical/electronic equipment.

OR

60 semester units from an accredited college or university in a related electrical field.

AND

Five (5) years of experience as a journey-level electrician in an industrial setting performing troubleshooting, repair, and installation of a wide variety of electrical/electronic equipment.

\*NOTE: Seven (7) years of full-time journey-level electrician work experience in an industrial setting performing troubleshooting, repair, and installation of transmission and power distribution equipment, large motors, motor control centers, motor controls, branch circuits, and programmable logic controllers is accepted as an equivalent to “completion of a State of California approved 60 month electrical apprenticeship and two years of journey-level Electrician experience.”

#### SPECIAL REQUIREMENTS

Possession of a Class C California Driver’s License is required at time of appointment, and must be maintained through entire term of employment in this class.

Depending upon assignment, may be required to obtain a valid California Commercial Class B Driver’s License with airbrake endorsement within 6 months of appointment and may be required to maintain the appropriate license for the entire term of employment in this class.

Must complete Airfield Sign-Offs within six (6) months of appointment.

APPROVED: (Signature on File)  
Director of Personnel Services

DATE: 3/7/2019

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