

AIRPORT ELECTRICAL MAINTENANCE TECHNICIAN

JOB DESCRIPTION

Classification Responsibilities: An Airport Electrical Maintenance Technician is responsible for performing a variety of semiskilled and skilled tasks in the maintenance of the airfield and adjacent City-owned buildings. Incumbent has primary responsibilities for working with high-voltage electrical systems (up to 5,000 volts) with no margin of error. Works with high voltage lines, changes out transformers for runway, taxiway, and threshold lighting. Maintains specialized airport lighting (PAPI, REIL, etc.) and beacon navigational aids, changes out electrical relays, points, circuit boards; utilizes test equipment and checks to see that navigational aids are in proper angle. Replaces burned wiring, circuit breakers, switches, fuses and brushes. Rebuilds and replaces damaged and outdated light fixtures for taxiway/runway and threshold. Performs electrical safety inspections in hangars and repairs and replaces receptacles and light switches, tests voltage and amps to comply with appropriate codes. Assists, as needed, in airport improvement projects and ensures contractors are in compliance with safety requirements for an airport. Uses appropriate safety equipment and follows safety procedures, including unique requirements of the Federal Aviation Administration (FAA). Assists with other airport maintenance duties such as mowing airfield grass, performing runway inspections, picking up trash and foreign object debris (FOD), issuing Notice to Air Missions (NOTAM), and conducting perimeter safety fence inspections. An employee of this class is required to respond to air-related emergency situations and weather emergencies on a 24-hour a day/7 days per week basis. This position assumes all duties of supervisor in his/her absence and performs related duties as required. Performs related duties as required.

Distinguishing Features: This class is distinguished from the class Airport Maintenance and Operations Technician by its requirement to work with high voltage electrical systems, and the requirement to perform supervisor's duties in his/her absence. This class is supervised by the Airport Maintenance and Operations Foreman and is FLSA nonexempt.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required. Any combination of training, education, and experience equivalent to graduation from high school or GED. Completion of trade/vocational school training in high voltage electrical systems or certification by the American Association of Airport Executives (AAAE) as an Airport Certified Employee (ACE) - Airfield Lighting Maintenance. Good (1 - 3 years) experience in facilities and grounds maintenance, or other related maintenance experience.

Special Requirements. Must possess a valid Class D Arizona Driver's License by hire date. Must obtain certification by the American Association of Airport Executives (AAAE) as an Airport Certified Employee (ACE) - Airfield Lighting Maintenance within six (6) months of hire or promotion date.

Substance Abuse Testing. Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug and/or controlled substance testing as outlined in City policy and procedures.

Preferred/Desirable Qualifications. Experience in the operation and maintenance of airfield equipment and six (6) months or more general airfield maintenance is desirable. Experience using two-way radio in airport setting is highly preferred.

ESSENTIAL FUNCTIONS

Communication: Communicates orally with the general public, tenants, contractors, other City employees, air traffic controllers, and other regulatory entities so that safe access to runways and taxiways is ensured. Produces written documents, such as: inventory reports, daily airport inspection reports, work schedules, and work orders to maintain required documentation. Operates two-way radio. When requested by supervisor, responds to unscheduled requests for assistance from hangar tenants and other airport facility users. Requires ability to write concise reports on maintenance or operations issues and maintain adequate documentation for recordkeeping requirements.

Manual/Physical: Troubleshoots electrical problems and makes necessary repairs. Changes out transformers for runway, taxiway, and threshold lighting. Performs high-voltage and low-voltage electrical work at the airport; installs new circuits, and runs conduit as required. Performs electrical safety inspections and tests voltage and amps to comply with codes. Utilizes voltage meter, amp meter, megometer, and inductive voltage tester. Ensures electrical work is performed with no margin of error due to extreme danger to property and life. Work is performed in varying climatic conditions and requires the ability to move items weighing up to 100 pounds using assistive devices (e.g., cart, power winches, rigging equipment, etc.). Works around and uses potentially hazardous materials (example: cleaning fluids, chemicals, pesticides, paint, and similar solutions using appropriate protective equipment. Work is performed at maximum height of 120 feet while doing maintenance and repair work (e.g., rotating beacons, roof leaks, replacing lighting, and painting). Maintains proper angle of Precision Approach Path Indicator (PAPI) lights for aircraft approaches on correct flight path. Installs and replaces runway and taxiway lights, Runway End Identifier Lights (REILs), PAPI lights, and beacon lights. Maintains airport vehicles and airport equipment. Performs physical inventories by counting lighting and equipment items. Maintains roof panels and lights, lighting and building areas. Operates a motor vehicle or equipment such as: pickup truck, dump truck, water truck, bucket truck, mower, scissor lift, weed eater, posthole digger, front end loader, car, sweeper, and tractor requiring a standard Class D Arizona Driver's License. Cleans work area and equipment using a broom, mop or high-pressure equipment. Operates maintenance equipment such as, but not limited to: welding equipment, jack hammers, tampers, high pressure washers, buffers, airless paint guns, cement mixers, power augers, roto tillers, wood power saws, and related equipment. Moves debris, dirt, and other materials such as asphalt and concrete block to level assigned areas. Moves heavy objects, such as hangar doors and other materials to maintain clear aircraft movement area. Moves light objects such as barricades, traffic cones, and small equipment to facilitate safe aircraft movement. Performs groundskeeping, washes hangars, uses cleaning fluids, cement, pesticides, and cold mix to maintain pavement areas. Uses stencils to paint airport markings. Detects hazardous situations, natural gas leaks, toxic gases, smoke and other hazardous materials and responds using appropriate safety measures. Inspects or monitors objects such as equipment, generator, and airport lighting to determine compliance with prescribed operating or safety standards. Monitors contractors unfamiliar with airport operations, pavement and lighting conditions and equipment conditions to determine compliance with airport safety procedures and Federal Aviation Administration (FAA) safety standards. Must have full color vision for work with electrical wires, paint and runway lighting fixtures to meet safety requirements.

Must have sufficient range of hearing to detect traffic sounds, including awareness of overhead and surrounding aircraft location, backup warning devices, and sirens. Uses specialized electrical and common hand tools to perform maintenance duties and operate a variety of standard office equipment, which may require use of personal computers and related software. Utilizes two-way radio, weed sprayers, and other common tools for maintenance and operations work.

Mental: Reads and understands electrical schematics as well as unique FAA electrical circuitry requirements. Comprehends safety and equipment manuals to maintain safe work environment. Prioritizes work in coordination with supervisor's requests. Learns job-related material through on-the-job training and classroom instruction regarding airport safety and equipment operation. May assist Airport Administration staff with fire inspections, aircraft parking ramp inspections, and various ground lease issues. Understands and interprets blueprints and layouts in order to complete assigned tasks. Comprehends requirements of position so that work with other staff, users, tenants, emergency personnel, law enforcement and FAA staff can be frequently accomplished without direct supervision.

Knowledge/Skills/Abilities:

Knowledge of:

FAA and airport rules and regulations applicable to airfield maintenance, operations and safety;
FAA electrical circuitry requirements and electrical high voltage installation requirements; methods, policies and procedures of grounds and facilities maintenance;
use of small hand tools, tractor operations and diesel and gasoline powered vehicles; maintenance and repair techniques for diesel and gasoline powered vehicles;
safety requirements of airfield maintenance activities;
safety precautions and hazards common to the dispensing of fuels into City vehicles; and
appropriate use of pesticides, herbicides and rodent control chemicals and devices.

Skill in:

use of two-way radio and related communications equipment; operation of motor vehicles and heavy equipment;
communicating orally and in writing to accomplish airport maintenance, operations and safety;
use of voltage meters, amp meters, megometers and inductive voltage testers; and
safe testing and repair of low-voltage and high voltage (up to 10,000 volts) electrical systems.

Ability to:

interact effectively with a variety of City employees, contractors, tenants and FAA regulatory staff;
understand and implement appropriate workplace safety methods;
obtain herbicide control applicator certificate;
utilize personal computer and related software and database systems;
respond on short notice to emergency call out;
work in a variety of climatic conditions;
safely lift and/or move objects weighting up to 100 pounds and to work at heights of up to 120 feet;
follow written and oral instructions; and
prepare concise written reports and legibly complete required reports/forms.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

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PAY GRADE:46

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