



Code: 5035

Family: Construction, Maintenance, and Skilled Labor

Service: Operation and Construction

Group: Electrical and Mechanical

Series: Electrical Construction and Maintenance

CLASS TITLE: ELECTRICAL MECHANIC

CHARACTERISTICS OF THE CLASS

Under supervision, performs journey-level electrical work in the installation, repair, and maintenance of electrical wiring systems and equipment found in municipal buildings, airports, water purification plants, and substations, and performs related duties as required

ESSENTIAL DUTIES

- Reads blueprints, specifications, and work orders to assess work required and to determine the proper installation and repair method to use
- Ensures adequate supplies of tools, equipment and materials are at work sites to complete jobs
- Performs electrical installations and maintains and repairs electrical wiring and equipment
- Installs and maintains conduits for telephone and electrical circuits and switchgear, and tests and replaces over-current devices
- Starts, stops, maintains, and repairs large pump motors found in water purification plants and pumping stations
- Installs, maintains, and repairs lighting systems in airports' operations areas
- Services and maintains electronic equipment used in emergency communications including dispatch console and data radio control equipment
- Tests and maintains telecommunications circuits to ensure proper systems operations
- Installs, maintains and performs bench repairs and optimization of portable and mobile radios and data terminals, automatic vehicle locator equipment, trunked radio systems and related equipment
- Uses testing equipment to inspect and test electrical installations and repair work for compliance with safety and building code requirements
- Positions with an A card are regularly engaged in medium and high voltage installations and repairs (e.g., 480V – 4160V)
- Prepares work activity reports

NOTE: *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

MINIMUM QUALIFICATIONS

Education, Training, and Experience

- Successful completion of a US Department of Labor registered electrical mechanic apprenticeship training program and journeyman status; or an equivalent combination of education, training, and experience

Licensure, Certification, or Other Qualifications

- A valid State of Illinois driver's license is required
- Some positions may be required to obtain airfield certification
- Some positions may require a first class FCC license
- Some positions may require status as a journeyman wireman and possess a valid A card

WORKING CONDITIONS

- Exposure to outdoor weather conditions
- Exposure to loud noise, fumes or dust, oily or wet environment
- Exposure to hazardous conditions (e.g., electrical machinery)
- Work performed above or below ground level
- Work performed using scaffolds and ladders

EQUIPMENT

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Hand tools (e.g., hammer, screwdriver, wrench, pliers)
- Power tools (e.g., cutting, bending and threading machines)
- Personal protective equipment (e.g., hard hat, shoes, glasses, gloves, vest, pads)
- Testing and monitoring equipment (e.g., ammeters, oscilloscopes)
- Measuring tools (e.g., tape measure, ruler, calipers, measuring wheel)
- Ladders

PHYSICAL REQUIREMENTS

- Substantial lifting (up to 50 pounds) is required
- Ability to stand and walk for extended or continuous periods of time
- Ability to quickly bend, stretch, twist, or reach out with one's body, arms, and/or legs
- Ability to climb staircases, ladders, and/or step stools
- Ability to operate applicable hand tools, power tools, and equipment
- Ability to tolerate heights while working

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS

Knowledge

Moderate knowledge of:

- *principles, work methods and techniques of the electrical trade
- *repair, maintenance, and preventative maintenance methods, practices, and procedures applicable to the electrical trade
- *applicable safety and code standards specific to the electrical trade (e.g., National Electrical Code, OSHA standards)
- *use of safety equipment and protective gear
- municipal building, airport, water purification plant, and substation mechanical and electrical systems

Some knowledge of:

- *applicable test instruments and hand and power tools
- *equipment and materials specific to the electrical trade
- manufacturers' manuals for servicing equipment
- electrical regulations and requirements found in the City of Chicago's building code

Knowledge of applicable City and department policies, procedures, rules, and regulations

Skills

- *ACTIVE LISTENING - Give full attention to what other people are saying, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- EQUIPMENT MAINTENANCE - Perform routine maintenance on equipment and determine when and what kind of maintenance is needed
- *EQUIPMENT SELECTION - Determine the kind of tools and equipment needed to do a job
- *INSTALLATION - Install equipment, machines, wiring, or programs to meet specifications
- *OPERATION AND CONTROL - Control operations of equipment or systems
- *OPERATION MONITORING - Watch gauges, dials, or other indicators to make sure a machine is working properly
- *REPAIRING - Repair machines or systems using the needed tools
- *TROUBLESHOOTING - Determine causes of operating errors and decide what to do about it

Abilities

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense

Other Work Requirements

- INITIATIVE - Demonstrate willingness to take on job challenges
- STAMINA - Demonstrate energy and stamina to accomplish work tasks
- DEPENDABILITY - Demonstrate reliability, responsibility, and dependability and fulfill obligations
- ATTENTION TO DETAIL - Pay careful attention to detail and thoroughness in completing work tasks

All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

* May be required at entry.