



**Code: 5087**

Family: Construction, Maintenance, and Skilled Labor

Service: Operation and Construction:

Group: Electrical and Mechanical

Series: Electrical Construction and Maintenance

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## **CLASS TITLE: TRAFFIC SIGNAL REPAIRMAN**

### **CHARACTERISTICS OF THE CLASS**

Under supervision, installs, maintains, and repairs traffic signal control devices and related electrical equipment in the field or in the shop as assigned, and performs related duties as required

### **ESSENTIAL DUTIES**

- Examines wiring diagrams, circuit blueprints, cable prints, and controller timing-sequence charts to determine existing electrical configurations
- Works in the field, installing new traffic signals and control cabinet equipment requiring electrical wiring of timing devices and control mechanisms
- Locates, identifies, and clears defects in cables and wires using testing equipment including multi-meters and resistance banks
- Adjusts and replaces electronic traffic signal timing devices and control mechanisms
- Troubleshoots electrical and mechanical problems to repair traffic control equipment on-site
- Installs new parts to replace malfunctioning equipment including lamps, fuses, and relays and other related parts
- Installs temporary electrical traffic signal control devices to accommodate various construction projects
- Modifies timing parameters and sequencing in electrical traffic signal control devices
- Works in the shop, troubleshooting and repairing traffic signal control equipment and cabinet components brought in for repairs, overhauls and maintenance
- Uses testing equipment to diagnose traffic signal control equipment malfunctions and overhauls and replaces mechanical parts and electronic components including controllers, conflict monitors and video components
- Constructs traffic cabinets for installation in the field, wiring components, adding video components and programming traffic controllers. Uses test equipment to certify accuracy of control cabinet equipment.
- 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 lineman apprenticeship training program and journeyman status; or an equivalent combination of education, training, and experience

#### **Licensure, Certification, or Other Qualifications**

- International Municipal Sign Association (IMSA) – Level Two Certification is required
- A valid State of Illinois driver's license is required

- Must have the permanent use of an automobile that is properly insured, including a clause specifically insuring the City of Chicago from accident liability

### **WORKING CONDITIONS**

- Exposure to outdoor weather conditions
- Exposure to hazardous conditions (e.g., traffic)
- Work performed in cramped or confined locations
- Work performed above or below ground level
- Work performed using scaffolds and ladders and aerial lift trucks
- Work performed at great heights with the use of safety belts

### **EQUIPMENT**

- Hand tools (e.g., hammer, screwdriver, wrench, pliers)
- Testing and monitoring equipment (e.g., multimeters, calibration equipment, fiber optics)
- Personal protective equipment (e.g., hard hat, shoes, glasses, gloves, vest, pads)
- Safety devices or equipment (e.g., cones, barricades, metal plates, scaffolding, ropes)
- Communications equipment (e.g., two-way radio, cell phones)

### **PHYSICAL REQUIREMENTS**

- Heavy lifting (up to 75 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:

- \*traffic signal technology
- \*traffic signal control equipment including the programming and maintenance of controllers, conflict monitors and vehicle and pedestrian detection systems
- \*electronic circuit operation and fault diagnosis relating to traffic signal controllers
- \*use of safety equipment and protective gear
- \*applicable diagnostic test equipment and hand and power tools
- \*applicable safety and code standards specific to the lineman/ traffic signal field
- work procedures used in the repair and installation of traffic control mechanical and electronic systems

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

**Skills**

- \*ACTIVE LEARNING - Understand the implications of new information for both current and future problem-solving and decision-making
- \*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 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
- 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

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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.

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City of Chicago  
Department of Human Resources

Date: September, 2010