

**ELECTRICAL OPERATIONS LEADWORKER**

11. **Functions and Worker Activities**

- 15% A. Install, maintain, program and update the City's traffic signal (and related) computer systems.
  - 6% A1. Program and monitor the operation of controllers and computer systems used for traffic signals.
  - 3% A2. Research and design equipment used for traffic signals, streetlights.
  - 3% A3. Develop techniques and designs to integrate standard signal equipment for Madison's needs.
  - 3% A4. Test and develop programs used for traffic signals, street lights, and related activities.
  
- 40% B. Install, maintain and repair City owned traffic signals, streetlights, and related equipment at a master electrician level and in a leadworker capacity.
  - 35% B1. Install and maintain traffic signals and associated equipment such as controllers, vehicle detectors, etc.
  - 5% B2. Install and maintain city owned streetlights and associated equipment.
  
- 40% C. Perform general leadworker services.
  - 10% C1. Monitor projects performed by workers in the electrical section.
  - 10% C2. In a leadworker capacity, plan, assign and oversee the maintenance and repair of city owned traffic signals and streetlights.
  - 5% C3. Oversee the installation and repair of City fiber optic cable.
  - 5% C4. Plan and distribute daily work assignments in the electrical section.
  - 5% C5. Review daily work reports and end of project billings.
  - 5% C6. Oversee the electrical section inspection of contractors involved in city projects.
  
- 5% D. Perform miscellaneous worker activities.
  - 2% D1. Complete daily work orders and time sheets.
  - 2% D2. Maintain the traffic signal and project records kept at the shop.
  - 1% D3. Equipment clean up and maintenance.

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12. **Primary knowledge, skills and abilities required:**

Considerable knowledge of the layout, repair and maintenance of traffic signals including solid-state electronic equipment, computerized controllers, and related equipment. Working knowledge of related microcomputer applications. Ability to use documented programs and develop special-purpose applications. Working knowledge of basic traffic signal timing principles. Ability to understand and operate complex electronic controls and devices used in traffic signal, lighting, and emergency alarm systems. Working knowledge of streetlights, circuits and related equipment controls. Working knowledge of occupational hazards and necessary safety precautions for electrical work and industrial wiring. Working knowledge of fiber optic cable installation and maintenance. Working knowledge of work zone safety applications and procedures. Ability to operate related test equipment such as oscilloscopes, voltmeters, etc. Ability to work from schematics, penciled layouts, blueprints and specifications. Ability to maintain related records and prepare reports. Ability to establish and maintain effective working relationships. Ability to communicate effectively, both orally and in writing. Ability to oversee the operations of a work section involved in the repair and maintenance of traffic signals and streetlights. Ability to work at heights. Ability to operate related equipment and vehicles to include aerial lift trucks. Ability to work in adverse weather conditions.

EOL:tmw

Attachment 1