TRAFFIC SIGNAL-STREET LIGHT TECHNICIAN

DEFINITION

This is a journey-level electrician classification that works independently with minimal supervision. Incumbents perform a variety of complex and skilled work in electrical operations, maintenance, alteration, and repair of electrical systems and equipment; install, maintain, troubleshoot, and repair series circuit and parallel circuit street lighting, traffic signals, and traffic control devices; locate, test and repair malfunctions of underground cables, electrical systems, and electrical equipment. Incumbents may be assigned to perform skilled electrical work on municipal buildings and facilities and other general maintenance duties as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Public Works Maintenance Supervisor – Streets. Responsibilities may include providing lead direction to less experienced staff that are assigned to support or assist incumbents on larger assignments.

EXAMPLES OF DUTIES

Perform a wide range of inspections and preventative maintenance work on traffic signals, controllers, and streetlights; test and diagnose problems on electronic equipment including traffic signal heads, streetlights, controllers, auxiliary equipment and other systems to ensure that they operate as intended; and ensure electrical compatibility and safety of components. Install, adjust, and test, traffic signal and streetlight software, hardware and circuitry; complete regular monthly preventive maintenance inspections of traffic signal and streetlight equipment; diagnose malfunctions and makes necessary repairs; paints traffic signal and street light equipment; operate testing and measurement equipment. Complete emergency repairs during and/or after normal work hours, including weekends; and assists other staff members with related work as assigned.

Respond to traffic signal pole or streetlight pole knockdowns and/or malfunctions of traffic signal and streetlight equipment; repair, replace, modify and install traffic signal and street light equipment including signal heads, poles, controllers, lights, circuitry, switches, fuses, timers and cabinet parts; make field repairs of traffic signal controls and auxiliary equipment; perform electrical system wiring and installations; locate conduit, cables and other underground devices; investigate complaints and reports of malfunctions; advise management if continued operation of equipment would present a problem or a hazard.
Check intersections for proper signal operations and operate specialized computer programs to make signal timing changes as directed, ensuring that proper timing is restored after repairs are made; install or upgrade signal equipment including loops and vehicle detectors based on engineering drawings; consult with traffic engineering staff or factory representatives to identify and resolve technical problems; may reconstruct and refurbish traffic signal equipment or defective electrical equipment in the shop using appropriate tools and methods; inspect and test equipment installed by contractors.

Ability to read, understand and interpret complex electrical plans, specifications and schematics; ensure conformity with codes, regulations and safety requirements; locate and mark underground utilities, cables, conduits and loop wires to prevent damage during excavation; maintain accurate maps and schematic drawings; perform general electrical maintenance and repair work as assigned.

Maintain accurate manual and computerized work records, logs and other documents; maintain traffic signal cabinet records of all repairs or timing changes made to traffic signals; maintain records related to reported malfunctions and repairs to street lights; prepare work orders and help maintain adequate inventory of materials and supplies; prepare work estimates; makes recommendations for the street lighting and traffic signal operational and maintenance improvements, and implement programs as approved; prepare a variety of reports.

Perform traffic safety work including resetting and removing of temporary traffic control signage and delineation (cones, barricades, etc.) as required.

Maintain tools and equipment in a safe and efficient manner; clean shop and equipment as necessary; follow proper safety procedures in a variety of hazardous environments including high voltage areas and when operating an aerial personnel lift.

**MINIMUM QUALIFICATIONS**

**Knowledge of:** Specialized principles, methods, material, tools, and practices utilized in the traffic signal and street lighting maintenance trades; work area safety and traffic control devices; safety regulations and practices applicable to electrical equipment; tools and materials used for the repair, inspection and maintenance of traffic signals and street lights; and use of personal computers and mobile devices.

**Ability to:** Perform the full range of traffic signal and street lighting maintenance and repair duties. Follow detailed and technical written or verbal instructions; communicate effectively, both orally and in writing; read and understand plans, specifications, manuals, USA markings, and sketches related to traffic signals, street lighting, area lighting and
building electrical circuits; locate and repair defects in traffic signals, street lights, area lighting, and building electrical circuits; demonstrate skill and safe working practices in use of tools and equipment, perform duties in a safe manner while elevated above traffic in or on appropriate equipment; work at irregular hours; perform simple grasping, pushing, pulling, and fine manipulation; distinguish colors used in electrical cable coding; see gauges and lights on color panels; and lift or carry weight of approximately 50 pounds; interact positively and cooperate with co-workers, respond politely to customers, work as a team member, function under demanding time pressure and in inclement weather, respond in a positive manner to supervision, and attend work and perform duties on a regular and consistent basis.

**Experience:** Two years of responsible experience in, electrical construction and/or maintenance. Experience repairing traffic signals or electrical systems and/or related equipment is desirable.

**Education:** Graduation from high school, or the equivalent.

**Licenses/Certifications:** Possession of a valid Class C California Driver's License. Possession of International Municipal Signal Association Level I Traffic Signal Technician certificate within 12 months of hire, and Level II Traffic Signal Technician certificates within 24 months of hire. An incumbent who fails to obtain these certificates will not remain qualified for the position.

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