



## **City of Phoenix TRAFFIC SIGNAL TECHNICIAN**

**JOB CODE 74190**

Effective Date: 06/12

### **DISTINGUISHING FEATURES OF THE CLASS:**

The fundamental reason this classification exists is to perform technical journey level work in the installation, repair and maintenance of electrical and electronically controlled traffic signal control devices. Additional emphasis is placed on knowledge of fiber optics communications, WAN/LAN network equipment, camera systems wireless communication and other specialized equipment found in Intelligent Transportation Systems (ITS) environments. Incumbents work independently and exercise skilled judgment in the performance of assigned duties. Assignments may be oral or written and are often accompanied by printed documents, sketches, wiring diagrams, and blueprints. Work is supervised and reviewed by a Traffic Signal Technician Foreman.

### **ESSENTIAL FUNCTIONS:**

- Troubleshoots in the field and restores operation to traffic signal control and ITS devices that have undergone electrical/electronic equipment or wire/cable failure due to vehicular accidents, vandalism, adverse weather, or construction crews;
- Programs, maintains, and repairs various types of computerized traffic controllers, monitors, audio and video components, message displays, fiber optic and wireless communications equipment;
- Interprets work using electronic schematics, electrical wiring diagrams, printed documents, sketches, blueprints, and underground street intersection drawings;
- Tests traffic signal control equipment and related devices at the test bench or in the field to identify defects in electrical, electronic, and electro-mechanical equipment;
- Works with Traffic Engineers and Traffic Management Center professionals in programming traffic signal controllers and the associated equipment to modify, enhance, or improve the Light Rail Train system;
- Service as lead technician in the construction of new signalized intersections;
- Operates bucket or service trucks on surface streets and highways within the City;
- Demonstrates continuous effort to improve operations, decrease turnaround times, streamline work processes, and work cooperatively and jointly to provide quality seamless customer service.
- Operates bucket trucks and forklifts;
- Reinstalls pedestrian buttons and poles, replace wiring, mounts traffic signals and ITS equipment (cameras, radios, fiber optic equipment);



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- Performs a variety of preventive maintenance duties such as changing signal bulbs, painting poles, checking head poles and mast arms for proper alignment and cleaning reflectors, refractors, signal heads, lenses, and control cabinets;

### **Required Knowledge, Skills and Abilities:**

#### Knowledge of:

- Electrical, electronic, and electro-mechanical devices used in traffic control system components.
- Occupational hazards and safety precautions, procedures and protocols involved in the repair or maintenance of traffic signal equipment in a field environment while working around moving traffic.
- Standard tools, materials, methods, and practices of electrical and electronic repair.
- Fiber optics communications, WAN/LAN network equipment, camera systems wireless communication and other specialized equipment found in ITS environments.

#### Skill in:

- Electrical and electronic component and replacement repair work.
- Working safely with voltages as high as 220 VAC.

#### Ability to:

- Make skillful, controlled manipulations of small objects, such as wiring a control cabinet.
- Work at heights up to 45 feet, such as standing in a raised bucket to repair, remove, or replace signal heads or other devices.
- Lift arms above shoulder level, such as working with overhead wiring.
- Move objects up to 75 pounds such as damaged equipment, controller cabinet, poles and mast arms.
- Climb a ladder to reach objects.
- Bend, crouch, or stoop repeatedly or continually over time.
- Safely set up or remove traffic cones, barricades or other stationary warning signs.
- Work outdoors in a variety of adverse conditions, such as heavy nearby traffic and inclement weather with exposure to the elements, including heat, cold, rain, wind, and dust and air pollution.
- Perform duties safely in an environment with heavy vehicle, pedestrian and Light Rail Traffic and maintains composure and sound though process in stressful situations.



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- Work with Police, City and Contractor personnel and assume control of intersection at time of signal activation.
- Perceive the full range of the color spectrum, such as working with color-coded electronic components or multi-conductor cables.
- Use graphic instructions, such as schematic diagrams and blueprints.
- Use common hand tools, such as screwdrivers, wire cutters, pliers, or similar tools.
- Accurately enter data or information into a computer terminal, laptop computer, or other keyboard device.
- Exercise safety precautions and conform to safety rules and regulations.
- Accurately complete documents for records and files.
- Operate a computer, utilize various computer software programs, and maintain data files.
- Understand and follow verbal or written instructions in the English language.
- Communicate in the English language by phone, two-way radio or in person in a one-to-one or group setting.
- Work cooperatively with others.
- Work safely without presenting a direct threat to self or others.

### **Additional Requirements:**

- Some positions require the use of personal or City vehicles on City business.
- Individuals must be physically capable of operating the vehicles safely, possess a valid driver's license and have an acceptable driving record. Use of a personal vehicle for City business will be prohibited if the employee does not have personal insurance coverage.
- Some positions will be required to work irregular shifts, weekends, evenings, and holidays.
- Some positions will require the performance of other essential or marginal functions depending upon work assignment, location, or shift.

### **ACCEPTABLE EXPERIENCE AND TRAINING:**

An associate's degree in electronics and two years of experience working with traffic signal control devices or completion of a traffic signal technician trainee program. Other combinations of experience and education which meet the minimum requirements may be substituted.