



# Traffic Signal Electrician

## General Information

|                             |              |
|-----------------------------|--------------|
| <b>Classification Code:</b> | TCHSPC       |
| <b>Effective Date:</b>      | June 7, 2023 |
| <b>Pay Grade:</b>           | B24          |
| <b>FLSA Status:</b>         | Non-exempt   |

## Position Summary

The Traffic Signal Electrician performs and provides lead direction for the installation, maintenance, and repair of traffic signal systems, streetlight systems, communication systems, and other related electrical systems. Performs other duties of a similar nature or level.

## Classification Characteristics

The Technical Specialist is a paraprofessional classification focused on performing specialized functions and on how to carry out the operations of the process specified by higher level positions. This position has a choice as to how and when operations are carried out, but not as to what operations constitute the process and may include lead responsibilities for lower-level staff

## Essential Duties

*The duties listed below are a typical sample; position assignments may vary.*

- 1 Implements work plans and assigns and inspects the technical work of unit staff to ensure compliance with electrical codes, City specifications, and standards, and State safety laws.
- 2 Completes the more complex, and State-regulated, electrical maintenance and repair projects assigned to the traffic signal maintenance unit.
- 3 Participates in the inspections of new traffic signal, streetlight, and communications system installations and repairs for compliance with construction plans, specifications, and electrical codes.
- 4 Monitors all contracted projects that fall within the responsibility of the position.
- 5 Responds to emergency signal malfunctions and customer service requests and inquiries regarding traffic signals, streetlights, and communication systems.
- 6 Identifies and diagnoses maintenance and repair requirements and completes repairs or recommends corrective action to the supervisor.
- 7 Submits requirements and specifications for equipment and supplies.
- 8 Participates in the training and orientation of new employees, to include electrical apprenticeship training.
- 9 Participates as a member of the traffic emergency response team in rotation with other licensed electricians in the traffic maintenance unit.
- 10 Reads precision technical plans, blueprints, drawings and models to estimate the quantities of materials and type of work described in the plans and specifications.
- 11 Performs other duties of a similar nature or level.

## Functional Specific Responsibilities

N/A

| Qualifications  |
|---|
| <p><b>Minimum Qualifications:</b></p> <ul style="list-style-type: none"> <li>Associate degree or two-year technical certificate and 5 years of related experience or an equivalent combination of education and experience.</li> </ul>  |
| <p><b>Licensing/Certifications:</b></p> <ul style="list-style-type: none"> <li>Valid Oregon Class B Driver's license at time of appointment.</li> <li>State of Oregon Limited Maintenance Electrician (LME), General Journey Electrician (GJE), or General Supervising Electrician (GSE) license.</li> <li>IMSA Traffic Signal Technician 1 Certificate or the ability to obtain within 1 year of appointment.</li> <li>ODOT Traffic Signal Inspector Certification or the ability to obtain within one year of appointment.</li> <li>Locator Certification – training provided through 811 “call before you dig” within one year of appointment.</li> </ul> <p><i>Time frames for all certifications and licenses are firm unless extended. Such extension will not be unreasonably withheld.</i></p>  |
| <p><b>Technology Skills:</b></p> <ul style="list-style-type: none"> <li>Analytical or scientific software — Commercial or open-source software for electrical calculations</li> <li>Document management software — Adobe Systems Adobe Acrobat or similar</li> <li>Electronic mail software — Microsoft Outlook</li> <li>Office suite software — Microsoft Office software</li> <li>Operating system software — Microsoft Windows</li> <li>Spreadsheet software — Microsoft Excel</li> <li>Word processing software — Microsoft Word</li> </ul>   |
| <p><b>Knowledge Required:</b></p> <ul style="list-style-type: none"> <li>Administration and Resource Management — Knowledge of principles involved in strategic planning, resource allocation, leadership technique, production methods, and coordination of people and resources.</li> <li>Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.</li> <li>Mathematics — Knowledge of arithmetic, algebra, geometry, and their applications.</li> <li>Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.</li> </ul>  |
| <p><b>Skills:</b></p> <ul style="list-style-type: none"> <li>Complex Problem Solving, Judgment, and Decision Making — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions. Considering the relative costs and benefits of potential actions to choose the most appropriate one.</li> <li>Equipment Selection, Installation, Repair, and Maintenance — Determining the kind of tools and equipment needed to do a job, installing equipment, machines, wiring, or programs to meet specifications, repairing machines or systems, and performing routine maintenance on equipment and determining when and what kind of maintenance is needed.</li> <li>Instructing — Teaching others how to do something.</li> <li>Mathematics — Using mathematics to solve problems.</li> <li>Operations Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.</li> <li>Reading Comprehension and Writing — Understanding written sentences and paragraphs in work-related documents. Communicating effectively in writing as appropriate for the needs of the audience.</li> <li>Speaking and Listening — Talking and listening to others to convey and receive information effectively.</li> </ul> |
| <p><b>Abilities:</b></p> <ul style="list-style-type: none"> <li>Control Precision — The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.</li> <li>Depth Perception — The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.</li> </ul>  |

### Functional Specific Responsibilities

- Extent Flexibility — The ability to bend, stretch, twist, or reach with your body, arms, and/or legs.
- Far Vision — The ability to see details at a distance.
- Finger Dexterity — The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
- Gross Body Equilibrium — The ability to keep or regain your body balance or stay upright when in an unstable position.
- Manual Dexterity — The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
- Multilimb Coordination — The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.
- Near Vision — The ability to see details at close range (within a few feet of the observer).
- Number Facility — The ability to add, subtract, multiply, or divide quickly and correctly.
- Speech Clarity — The ability to speak clearly so others can understand you.
- Speech Recognition — The ability to identify and understand the speech of another person.
- Trunk Strength — The ability to use your abdominal and lower back muscles to support part of the body repeatedly or continuously over time without "giving out" or fatiguing.
- Visual Color Discrimination — The ability to match or detect differences between colors, including shades of color and brightness.
- Visualization — The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.

### Physical Requirements

| Key                          | None<br>0%<br>(0 hrs.) | Seldom<br>1-10%<br>(Up to 1 hrs.) | Occasionally<br>11-35%<br>(Up to 3 hrs.) | Frequently<br>36-75%<br>(3-6 hrs.) | Continuous<br>76-100%<br>(6+ hrs./day) |
|------------------------------|------------------------|-----------------------------------|--|------------------------------------|--|
|                              | 0%                     | 1-10%                             | 11-35%                                   | 36-75%                             | 76-100%                                |
| <b>BODY POSITIONS</b>        |                        |                                   |  |                                    |  |
| Standing                     |                        |                                   | X  |                                    |  |
| Sitting                      |                        | X                                 |  |                                    |  |
| Walking – Even Surface       |                        |                                   | X  |                                    |  |
| Walking – Uneven Surface     |                        | X                                 |  |                                    |  |
| Kneeling                     |                        | X                                 |  |                                    |  |
| <b>MOVEMENTS</b>             |                        |                                   |  |                                    |  |
| Bending/Stooping             |                        |                                   | X  |                                    |  |
| Twisting                     |                        |                                   | X  |                                    |  |
| Crawling                     |                        | X                                 |  |                                    |  |
| Squatting/Crouching          |                        | X                                 |  |                                    |  |
| Balancing                    |                        |                                   |  |                                    | X                                      |
| Reach – Overhead             |                        |                                   | X  |                                    |  |
| Reach – Forward              |                        |                                   | X  |                                    |  |
| Reach – Backward             |                        | X                                 |  |                                    |  |
| Climbing – stairs            |                        | X                                 |  |                                    |  |
|                              | 0%                     | 1-10%                             | 11-35%                                   | 36-75%                             | 76-100%                                |
| <b>PUSH/PULL</b>             |                        |                                   |  |                                    |  |
| 0-10 lbs.                    |                        |                                   |  |                                    | X                                      |
| 11-20 lbs.                   |                        |                                   |  | X                                  |  |
| 21-50 lbs.                   |                        |                                   | X  |                                    |  |
| 51-75 lbs.                   |                        | X                                 |  |                                    |  |
| 76-100 lbs.                  |                        | X                                 |  |                                    |  |
| <b>ENVIRONMENTAL HAZARDS</b> |                        |                                   |  |                                    |  |
| Indoors                      |                        |                                   | X  |                                    |  |
| Outdoors                     |                        |                                   |  | X                                  |  |
| Dust                         |                        | X                                 |  |                                    |  |
| Fumes/Odors/Gasses           |                        | X                                 |  |                                    |  |
| Chemical Agents              |                        | X                                 |  |                                    |  |
| Biological Agents            |                        | X                                 |  |                                    |  |
| Noise – Low                  |                        |                                   | X  |                                    |  |
| Noise – Moderate             |                        |                                   |  | X                                  |  |
| Noise – High                 |                        | X                                 |  |                                    |  |

| Physical Requirements     |  |   |   |   |   |   |  |   |   |   |
|---------------------------|--|---|---|---|---|---|--|---|---|---|
| Climbing - ladder         |  | X |   |   |   | Low Light<br>Heat<br>Cold   |  |   | X |   |
| <b>USE OF HANDS</b>       |  |   |   |   |   |   |  |   |   | X |
| Grasping – whole hand     |  |   |   | X |   |   |  |   |   | X |
| Grasping – pinch grip     |  |   | X |   |   | Restricted workspace<br>Vibration – whole body<br>Vibration - extremity                                     |  |   | X |   |
| Fine manipulation/feeling |  |   | X |   |   |   |  | X |   |   |
| Keyboarding               |  | X |   |   |   |   |  |   | X |   |
| <b>LIFT/CARRY</b>         |  |   |   |   |   | <b>JOB SPECIFIC</b>   |  |   |   |   |
| 0-10 lbs.                 |  |   |   |   | X | Driving – vehicle/equipment<br>Operate foot controls<br>Seeing<br>Talking<br>Hearing<br>Extended work hours |  |   |   | X |
| 11-20 lbs.                |  |   |   | X |   |   |  |   |   | X |
| 21-50 lbs.                |  |   | X |   |   |   |  |   |   | X |
| 51-75 lbs.                |  | X |   |   |   |   |  |   |   | X |
| 76-100 lbs.               |  | X |   |   |   |   |  |   |   | X |
|                           |  |   |   |   |   |   |  |   | X |   |

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| <b>Classification History</b> |
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Created 2012.01

2023.06 – Revisions and Reformatting by HR

**I have reviewed the job description.**

**Employee: Name**\_\_\_\_\_ **Signature** \_\_\_\_\_ **Date** \_\_\_\_\_