



Career Service Authority

Traffic Signal Technician 3

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GENERAL STATEMENT OF CLASS DUTIES

This class performs skilled work at the specialist level maintaining intelligent transportation sub-systems.

DISTINGUISHING CHARACTERISTICS

An employee in this class performs skilled shop and field tasks at the specialist level in assembling, installing, servicing, testing, repairing and adjusting electrical, electronic, and mechanical components of intelligent transportation sub-systems, and related equipment. This class may serve as a lead worker over lower classified technicians and workers and demonstrates the ability to work on more sophisticated traffic control equipment, including digital traffic control and computer peripheral devices. An employee in this class is subject to being on call for emergency repair work over weekends.

Guidelines, Difficulty and Decision Making Level:

Guidelines are generally in the form of stated objectives only, with issues and factors largely undefined, requiring the employee to exercise creativity and ingenuity in devising criteria, techniques, strategy and methodologies for approaching assigned functions or projects.

Duties performed involve concepts, theories and concrete factors to be evaluated and weighed, requiring a high degree of analytical ability, and independent judgment and decision-making.

Work assignment is generally unstructured and employee is responsible for organizing complex, varied and simultaneous coordination of several functions, programs or projects in various stages of completion.

Level of Supervision Received and Quality Review:

Under general supervision, the employee receives assignments and is expected to carry them through to completion with substantial independence. Work is reviewed for adherence to instructions, accuracy, completeness and conformance to standard practice or precedent. Recurring work clearly covered by guidelines may or may not be reviewed.

Interpersonal Communications and Purpose:

Contacts of a remedial nature involving the resolution of problems and where some degree of discretion and judgment are required in carrying out a major program and/or function of the organization.

Level of Supervision Exercised:

May perform lead work.

ESSENTIAL DUTIES

Installs and maintains intelligent transportation infrastructure sub-systems.

Installs signal controller cabinets, video and data modems, CCTV and autoscope cameras and control equipment and associated housings and racks.

Uses AutoCAD or similar software to document communication infrastructure installation and maintenance.

Performs software updates for controllers, modems, cameras and displays.

Installs fiber optic cable, underground duct lines, junction boxes and traffic control devices using construction equipment.

Coordinates and inspects active and pending jobs with contractors and other city entities.

Completes all required documentation and reports.

Takes rotating 24/7 weekend call for emergency traffic signal malfunctions.

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Any one position may not include all of the duties listed.
However, the allocation of positions will be determined by
the amount of time spent in performing the essential duties
listed above.
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MINIMUM QUALIFICATIONS

Competencies, Knowledge & Skills:

Customer Service – Works and communicates with customers to satisfy their expectations and is committed to quality service.

Reading – Understands and interprets written material, including technical material, rules, regulations, instructions, reports, and charts, graphs, or tables; applies what is learned from written material to specific situations.

Writing – Recognizes or uses correct English grammar, punctuation, and spelling; communicates information in a succinct and organized manner, produces written information, which may include technical material, which is appropriate for the intended persons.

Oral Communication – Expresses information to individuals or groups effectively; taking into account the audience and nature of the information; makes clear and convincing oral presentations; listens to others, attends to nonverbal cues and responds appropriately.

Mathematical Reasoning – Understanding of basic math that will be used on the job: counting, adding, subtracting and multiplying to include shift and schedule.

Interpersonal – Considers and responds appropriately to the needs, feelings, and capabilities of others; adjusts approaches to suit different people and situations; may deal with people who are difficult, hostile or distressed.

Integrity/Honesty – Contributes to maintaining the integrity of the organization; displays high standards of ethical conduct and understands the impact of violating these standards on an organization, self and others; is trustworthy.

Computer Systems – Utilizes a computer and desktop software to enter and retrieve data and complete reports and emails; also uses specialized traffic control software.

Skill in using hand tools and power tools common to the electrical and electronics trades.

Knowledge of electronics sufficient to be able to understand the functional and operational elements of intelligent transportation infrastructure sub-systems and related equipment.

Knowledge of theory, accepted practices and installation methods of 120/240 volt power systems.

Skill in using electrical and electronic test equipment.

Knowledge of safety hazards and necessary safety precautions sufficient to be able to establish a safe work environment for self and others.

Physical Demands:

Standing: remaining on one's feet in an upright position.

Walking: moving about on foot.

Sitting: remaining in the normal seated position.

Lifting: raising or lowering an object from one level to another.

Carrying: transporting an object, usually by hand, arm, or shoulder.

Pushing: exerting force upon an object so that the object is away.

Pulling: exerting force on an object so that it is moving to the person.

Climbing: ascending or descending objects usually with hands/feet.

Balancing: maintaining body equilibrium to prevent falling over.

Stooping: bending the body by bending spine at the waist.

Kneeling: bending legs to come to rest on one or both knees.

Crouching: bending body downward and forward by bending legs.

Crawling: moving about on hands and knees or hands and feet.

Reaching: extending the hand(s) and arm(s) in any direction.

Handling: seizing, holding, grasping, or otherwise working with hands.

Fingering: picking, pinching, or otherwise working with fingers.

Feeling: perceiving attributes of objects by means of skin receptors.

Talking: expressing or exchanging ideas by means of spoken words.

Hearing: perceiving the nature of sounds by the ear.

Repetitive motions: Making frequent movements with a part of the body.

Eye/hand/foot coordination: performing work through using two or more.

Lifting: Raising or lowering an object 25 – 50 pounds.

Far acuity: ability to see clearly at 20 feet or more.

Near acuity: ability to see clearly at 20 inches or less.

Depth Perception: ability to judge distance and space relationships.

Field of Vision: ability to see peripherally.

Accommodation: ability to adjust vision to bring objects into focus.

Color Vision: ability to distinguish and identify different colors.

Working Environment:

Extreme Cold: temperature cold enough to cause marked bodily discomfort.
Extreme Heat: temperature hot enough to cause marked bodily discomfort.
Temperature Changes: variations in temperature from hot to cold.
Wet: frequent contact with water or other liquid.
Humid: conditions with high moisture content to cause bodily reactions.
Noise: sufficient noise to cause distraction or possible hearing loss.
Vibrations: Strain on the body to cause bodily harm is endured daily
Hazards: Conditions where there is danger to life, body and/or health.
Atmospheric Conditions: conditions that affect the skin or respiratory system.
Exposure to hazardous chemicals.
May be exposed to extremes of heat and cold in all weather conditions.
May be exposed to hazardous chemicals.
Exposed to hazards from electro/mechanical/power equipment.
Exposed to toxic chemicals.
Exposed to unpleasant elements (accidents, injuries and illness).
Subject to burns and cuts.
Subject to hazards of flammable, explosive gases.
Subject to injury from moving parts of equipment.
Works in precarious or high locations (ladders, scaffolding, etc.)
Subject to many interruptions.
Subject to varying and unpredictable situations.
Handles emergency or crisis situations.
Subject to long irregular hours.
Handles absentee replacement on short notice.

Education Requirement:

High school diploma or GED Certificate with additional courses in electronics which must have included AC/DC electricity, solid state theory, use of electronic testing equipment and reading electronic schematics.

Experience Requirement:

Three years of experience in the installation and maintenance of traffic signal systems with one of those years specializing in installation and maintenance of intelligent transportation sub-systems such as programmable controllers, surveillance and detection, communications infrastructure, variable message signs etc.

Education/Experience Equivalency:

One year of additional experience installing and maintaining traffic signal equipment will substitute for the additional post high school course work in electronics.

Licensure and/or Certification:

Possession of a valid driver's license at the time of application is required.

By assignment some positions may require possession of a Colorado Commercial Drivers License (CDL) B with appropriate endorsements by completion of probation. Positions require a good driving record and license must be kept current as a condition of continued employment in this class.

Possession of IMSA Traffic Signal Level III Bench or Field Certification is required by the end of probation.

CLASS DETAIL

FLSA CODE: Non-Exempt

ESTABLISHED DATE: 09/16/2006

ESTABLISHED BY: Linda Wasserman

REVISED DATE:

REVISED BY:

CLASS HISTORY

This class was developed as part of the Traffic Signal Technician series is the specialist level class and will replace the Traffic Signal Electronics Technician and provide another level of career progression for Traffic Signal Technicians.