

CITY OF HAMILTON

PUBLIC WORKS DEPARTMENT

ENERGY, FLEET & FACILITIES DIVISION – TRAFFIC OPERATIONS – 1375 UPPER OTTAWA STREET

TRAFFIC SIGNAL TECHNICIAN– CUPE 5167

SUMMARY OF DUTIES

Reporting to the Traffic Signal Foreman/Woman, this position is responsible for the installation, maintenance, modification, testing, diagnosis, repair and operation of traffic control signal systems and associated equipment. This position operates in both office and field environments and is required to operate an aerial bucket truck (DZ License) and respond to trouble calls during normal business hours and while on stand-by (after hours, weekends). This position may also provide technical training to other subordinate positions.

GENERAL DUTIES

- Prepare, inspect and test traffic control signal cabinets, timers and associated equipment to be installed in the field. Tasks may include, but are not limited to:
 - Programming and testing field timers (TS1, TS2, ATC);
 - Modifying/adding phasing and circuits to comply with site specific requirements;
 - Installing, testing and configuring equipment for vehicle, bicycle and pedestrian detection (inductive loops, audible pedestrian signals, microwave sensors, video detection);
 - installing, testing and troubleshooting conflict monitor units (CMU) and Malfunction Management Units (MMU),
 - Performing field installations and inspections, and
 - Assisting Traffic Engineering staff in the verification of correct operation of all equipment in the workshop and in the field.

- Install, inspect, test, program, maintain and repair various electronic traffic control device equipment including, but not limited to:
 - Traffic signal cabinets and timers
 - Traffic signal hardware (poles, mast arms, heads, hangers, wire, conduit etc.)
 - Conflict monitor units (CMU) and Malfunction Management Units (MMU),
 - End-user detection systems (vehicle, pedestrian, bicycle),
 - Video surveillance systems,
 - Communication systems and components (spread spectrum radio networks, cellular networks, FSK, network switches, cell modems, virtual private networks, etc),
 - Accessible pedestrian signals (APS),
 - Universal power supplies (UPS),
 - Railway and other forms of pre-emption,
 - School zone flasher systems, and
 - Rapid rectangular flashing beacons (RRFB for PXOs).

- Prepare and maintain accurate records related, but not limited to, work orders, timesheets, material usage, trouble call/service request reports, conflict monitor testing, schematic and circuit diagrams, signal timing plans and signal maintenance reports.
- Provide utility locates services,
- Operate tools and equipment such as power saws, drills, grinders, cable locators, cable testers and multimeters,
- Drive and operate vehicles such as an aerial bucket truck and cargo van; load and unload equipment.
- Receive and answer inquiries from staff, police, suppliers and other stakeholders,
- Perform pre-scheduled 24 hour standby and on-call overtime duties for emergency repair of damaged or malfunctioning traffic signal equipment,
- Testify in court or claim proceedings on matters directly related to the prescribed job duties,
- Provide technical training and guidance to Traffic Operations and Engineering staff on related matters.
- Work in accordance with the provisions of applicable Health and Safety legislation and all City of Hamilton corporate and departmental policies and procedures related to Occupational Health and Safety.
- Perform other duties as assigned which are directly related to the major responsibilities of the job.

QUALIFICATIONS

1. Must possess a valid Certificate of Qualification as a Construction and Maintenance Electrician under the Ontario College of Trades and Apprenticeship Act (442 or 309A).
2. Preference for also having proven knowledge in the practices and theories of electronic engineering normally acquired by attaining a post-secondary course in Electronics Engineering (minimum 2 year program) or a related discipline or a combination of education and relevant experience.
3. Must have a valid class DZ Ontario Driver's License with a clean driving abstract.
4. Must be able to work in all outdoor environments and seasons.
5. Must be able to climb into and out of aerial bucket and operate at heights ranging from 3-15 meters in compliance with equipment safety standards.
6. Must be able to lift up to 70 lbs periodically.
7. Proven experience installing, maintaining, troubleshooting and repairing analogue, digital and microprocessor based electronic and electrical equipment.
8. Must be capable of working with a wide variety of electrical/electronic and network communication test equipment and instrumentation.
9. Knowledge of RF/FSK communication system installation, testing, operation, and troubleshooting considered an asset.
10. Work zone safety, Ontario Traffic Manual Book 7 training considered an asset.
11. IMSA Traffic Signals Level I, II and III (Field & Bench) considered an asset.
12. Certification as a 0 – 8 Ton Boom-Derrick Operator considered an asset.

13. Experience working from vehicle mounted aerial device considered an asset.
14. Intermediate to advanced understanding of Microsoft Office as well as other proprietary traffic signal and related software used to program and troubleshoot equipment considered an asset.

THIS POSITION REQUIRES A VALID CLASS "DZ" DRIVER'S LICENCE AND PROOF THEREOF IS REQUIRED AFTER HIRE.