CITY OF HAMILTON

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

ELECTRICAL TECHNOLOGIST–TRAFFIC SYSTEMS - CUPE 5167

SUMMARY OF DUTIES

Reporting to the Project Manager, Electrical Systems; this position is responsible for supporting the daily needs and activities of the Traffic Signals Section on matters related to electrical systems, electronics and network communication systems. This position will assist with the development of applicable standards, policies, procedures and processes related to the ongoing operation, maintenance and modernization of electrical and network communication systems associated with the City's traffic signal system and advanced traffic management system. Duties include but are not limited to; installation, maintenance and repair of traffic signal communications and electronic signal systems, researching methods and best practices, performing field inspections and audits, installing and testing equipment, troubleshooting faults, document preparation and record keeping, assisting with Capital budget and program preparation, and developing/administering training sessions for staff.

GENERAL DUTIES

- Assist in the development and recommendation of standards, policies, procedures and processes supporting the electrical, electronic and network communication systems and plant associated with the City's traffic signal system and advanced traffic management system.
- Provide system support and troubleshooting, repair and maintenance for various devices including, but not limited to, traffic signal cabinets, universal power supplies (UPS), accessible pedestrian signals (APS), various detection methods, general signal wiring, railroad pre-emption, emergency service pre-emption and other subsystems and devices.
- Install, operate, maintain, troubleshoot and repair various network communication types, devices and topologies including, but not limited to spread spectrum radio networks, cellular networks, FSK, network switches, cell modems, virtual private networks, etc.
- Install, test and troubleshoot various system components.
- Assist with the development of short term (0-5 years) and long range (5+ years) strategies for the continued implementation, operation and maintenance of the City's electrical and mechanical traffic signal plant including Capital and Annual budgeting,
- Perform field inspections along with relevant staff, contractors, utilities, ESA and others to ensure conformance to appropriate standards and best practices,
- Perform field testing audits on grounding, bonding, stray voltage, power quality etc.
- Assist with the preparation of technical specifications and other procurement related documents (tenders, RFP, RFQ etc.) for parts, materials and services in accordance with applicable policies. Perform quality control and testing of third party goods and services.
- Develop and maintain a document/records database comprised of standards, specifications and drawings.
- Prepare and maintain as-built drawings.
- Develop and implement pilot projects and equipment evaluations.
- Provide technical training and guidance to Traffic Operations and Engineering staff on related matters.
- Work in accordance with the provisions of all Federal, Provincial, Corporate and Departmental policies and procedures.

- Perform other duties as assigned that are directly related to the major responsibilities of the job.

QUALIFICATIONS

1. Proven knowledge of industry theories, best practices and trends related to the planning, design, operation and maintenance of electrical/electronic and network communication systems normally acquired by attaining an engineering technologist 3 year diploma in Electrical Engineering Technology or an equivalent combination of education and work related experience. Certification as a C.E.T with O.A.C.E.T.T is considered an asset.
2. A minimum of 2 years of directly related experience.
3. Proven experience testing, deploying, operating and maintaining various electrical/electronic and network communication system components including, but not limited to, grounding, bonding, stray voltage, power quality, Programmable Logic Controllers, CISCO network management, spread spectrum radios, network switches, cellular modems etc.
4. CISCO certification (CCNA or CCNP) and IMSA Traffic Signals certification considered an asset.
5. Must be capable of working with a wide variety of electrical/electronic and network communication test equipment and instrumentation.
6. Must have proven experience using Microstation and/or AutoCad.
7. IMSA Traffic Signals certification considered an asset,
8. Must be willing and able to work in both indoor (office/lab) an outdoor (roadway) environments,
9. Must have a valid class G Ontario Driver's License with a clean driving abstract.