

CITY OF CEDAR RAPIDS POSITION PROFILE	JOB CODE #/TITLE: NB163 Traffic Engineering Electronics Specialist I
POSITION #/TITLE: 0505, 1121 Traffic Engineer Electronics Specialist I	Adopted: 07-97 Revised: 10-14

POSITION DESCRIPTION

Dept /Division: Public Works/Traffic Engineer	Manager Level: Non-Manager
Salary Plan/Description: NBU/Non-Bargaining Unit	Salary Grade: 09
Reports To Position #/Job Code #/JC Title: 0124/NB025/Assistant Traffic Engineering Manager	Dotted-line Reports To Position #/Job Code #/JC Title:
FLSA Status: Non-Exempt	City Overtime Status (Employee Type): Non-Exempt (Exception Hourly)
Physical Demand Rating: Medium	Work Environment: Uncontrolled
Pre-employment Testing: Drug and health after screening after contingent offer.	Position Testing: Knowledge and skills test
Personal Protective Equipment: Eye, Face, Hand, Head, Reflective Vest, Hearing, Fall Protection	

General Statement of Duties

Repairs electronic systems and electronic traffic control equipment; performs related work as required. Installs, maintains and repairs the computerized signal system, signal communication.

Distinguishing Features of the Class

Considerable leeway is granted for the exercise of independent judgment and initiative.

Examples of Essential Work (Illustrative Only)

Installs, maintains and repairs microprocessors, digital and analog traffic controllers, detectors, amplifiers and electro-magnetic traffic control equipment using oscilloscopes, digital meters, and other electronic and testing equipment;

Designs, constructs and installs test units, logic units and electronic circuits for traffic control;

Maintains the traffic signal network software and hardware;

Conducts research and testing of new electronic traffic control and street lighting equipment;

Coordinates maintenance and operation of traffic signal communication systems with local utilities;

Documents schematic drawings, blueprints and plans for electronic components and projects;

Performs installation, maintenance and repair of data communication lines and equipment; uses appropriate fiber optic diagnostic and repair tools and equipment such as OTDR and fusion splicer

Installs, maintains and repairs electrical equipment to meet program requirements and changing needs;

Monitors and upgrades traffic signal and testing equipment to meet national and local code requirements;

Implements signal timing changes;

Calculates signal timing as needed under the direction of a Traffic Engineer;

Operates construction tools and equipment and provides manual labor to accomplish program goals and objectives;

Performs emergency maintenance and repairs to traffic signal equipment and communication facilities;

Orders and maintains inventory of parts and components used in electronic operations;

Develops reports and maintains work records;

Performs all work duties and activities in accordance with City policies, procedures and safety practices;

Supports continuous process improvement initiatives;

Attends work regularly at the designated place and time;

Performs related work as required.

Required Knowledge and Abilities

Comprehensive knowledge of electronic traffic control devices, circuitry and control;
Comprehensive knowledge of micro-processors, digital computers, integrated circuitry and network systems;
Thorough knowledge of data transmission, reception and cabling techniques;
Good knowledge of electrical design, maintenance, repair and safety principles and practices;
Good knowledge of construction principles and practices;
Ability to read and interpret electronic and fiber optic schematics, blueprints and plans;
Ability to operate electronic testing equipment and design circuitry used in traffic control;
Ability to design, install, maintain and repair electronic and electro-mechanical devices used in traffic control;
Ability to communicate effectively and maintain working relationships with electrical, information technology and maintenance personnel and contractors both orally and in writing, using both technical and non-technical language;
Ability to prepare accurate and reliable reports containing electrical standards and performance, mathematical calculations, signal timing, programming features, findings, conclusions and recommendations;
Ability to use logical and creative thought processes to develop solutions according to written specifications and/or oral instructions;
Ability to work cooperatively and to maintain effective working relationships to accomplish job responsibilities;
Ability to quickly learn and put to use new skills and knowledge brought about by rapidly changing information and/or technology;
Ingenuity and inventiveness in the performance of assigned tasks.

Acceptable Experience and Training

Graduation from an accredited college or university with an Associate's Degree in Electronics; and
Considerable experience in installing, repairing and maintaining electrical components and traffic control devices; or
Any equivalent combination of experience and training which provides the knowledge and abilities necessary to perform the work.
International Municipal Signal Association (IMSA) certification for Work Zone Safety and Traffic Signal Technician Level 1 preferred.

Required Special Qualifications

Valid Iowa Commercial Driver's License (Class B) with appropriate endorsements upon appointment.
International Municipal Signal Association (IMSA) certification for Level 2 Bench Technician within two years, or as directed.

Essential Physical Abilities

Sufficient clarity of speech and hearing, with or without reasonable accommodation, which permits the employee to communicate effectively;
Sufficient vision, with or without reasonable accommodation, which permits the employee to operate hand and power tools, maintain electronic controls and install electronic components;
Sufficient manual dexterity, with or without reasonable accommodation, which permits the employee to operate hand and power tools, electronic controllers and electronic testing equipment;
Sufficient personal mobility, with or without reasonable accommodation, which permits the employee to operate electronic testing instruments, install electrical components and work in confined spaces.