

## CITY OF HAMILTON

### PUBLIC WORKS DEPARTMENT

(TRANSPORTATION, ENERGY & FACILITIES DIVISION - CORPORATE FACILITIES – LOCATION – CENTRAL UTILITIES PLANT, 121 KING ST. W.)

### BUILDING AUTOMATION SYSTEMS TECHNOLOGIST- CUPE 5167

#### SUMMARY OF DUTIES

Under the direction of the Superintendent Utilities or the Facility Supervisor, the incumbent is responsible for the installation, maintenance (repair) and calibration of all heating, cooling, humidification and ventilation microprocessor based control and monitoring systems within the Facility Department, and ensures all microprocessor based-controls are functioning as designed. The incumbent also conducts analysis and correction of direct digital control programs, as well as performing troubleshooting diagnostics on the remote computerized data gathering field panels, while maintaining a large Computerized Control and Monitoring System (CCMS). Acts as a lead hand to internal staff to ensure work is completed. Oversees contractors.

#### GENERAL DUTIES

Directs staff and contractors on repairs required on equipment, verifies work completed and operating correctly.

Assess' site condition and work required, directs contractors.

Repair, maintain, calibrate and adjust HVAC system microprocessor based controls to meet programmed control scheme specifications on the following microprocessor based control systems; Central Control Computerized HVAC and Direct Digital EXCEL Processors.

Program and perform installation of any microprocessor based control equipment related to the Central Control Monitoring System and Direct Digital Control Systems.

Interpret/produce computer programmed control algorithms towards defined Energy Management program strategies within the EXCEL and the Distributed Control Panel Sub-Systems.

Investigate and diagnose software problems related to malfunctioning field data gathering panels, DDC controllers and associated CCMS peripherals.

Maintain proper calibration records and any program changes made in remote DDC panel memory logic control sequences.

Troubleshoot HVAC and other monitored and controlled systems connected to the CCMS and DDC automation peripherals and uses the field data test equipment to record proper control adjustments.

Perform as a "First Responder" to same day and emergency calls including hot/cold water or air, humid/dry environmental conditions, unknown odours, etc. as required.

Ensure that equipment, tools, materials, etc. are properly maintained and ensure economic use of same.

Maintain work area in a clean, safe and orderly condition.

May provide on the job guidance and training to lesser qualified maintenance personnel.

Complete requisitions for spare parts, etc. as required and sign out for tools as needed.

Perform routine or special preventive maintenance and accuracy checks on the equipment (monitoring and recording results).

Interpret computer programmed control algorithms associated with the BAS and other automation systems.

Investigate and diagnose software/hardware problems related to malfunctioning field data panels associated with the BAS and other automation systems.

Investigate and diagnose Logic Control problems associated with calibration of electronic temperature control modules.

Attend regular meetings with Supervisor and staff.

Follow all health and safety procedures.

Assist in developing health and safety procedures.

Adhere to all health and safety regulations and safe work practices.

May be required to perform other duties and functions related to this job description and multi duty functions, such as but not limited to: indoor/outdoor lighting; minor maintenance (eg. Hang pictures; painting; grounds clean up; house keeping; plumbing; minor electrical; HVAC repairs, etc.).

Monitor and test building safety devices such as sprinklers, alarms, generators, fire hoses and extinguishers.

Perform electrical repairs and troubleshooting as it pertains to equipment.

Conduct scheduled and unscheduled maintenance and repairs of mechanical equipment such as furnaces, boilers, heat pumps, cooling towers, humidifiers, circulating pumps, exhaust fans and air handling units.

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 major responsibilities of the job.

## **QUALIFICATIONS**

1. Proven knowledge of the principles and practices of Building and Controls Technology usually acquired through the successful completion of a three year technology community college diploma, preferably in Computer Engineering Technology or Electronic Technology or other relevant field or through a combination of education and relevant previous work experience in HVAC control systems.
2. Proven knowledge and relevant work experience in HVAC control systems. Proven theoretical knowledge and experience in the operation of heating, ventilation and air conditioning systems normally acquired by a combination of education and relevant trade related work experience.
3. Technical knowledge required in building H.V.A.C. maintenance, must be capable of performing specialized skills as an H.V.A.C. Technician or a Facilities Maintenance Technician or the equivalent education and relevant work experience.
4. H.V.A.C./BAS, systems experience mandatory.
5. A licensed electrician (309A or 309D) with an electrical background in the building controls environment is preferred.

6. Must be experienced in the troubleshooting and maintenance of Freon refrigeration systems, chillers and associated equipment.
7. Demonstrated ability to repair and maintain various types of equipment and buildings.
8. Proven theoretical knowledge and experience in the operation of heating, ventilation and air conditioning systems normally acquired by a combination of education and relevant trade related work experience.
9. A valid Ontario Gas Fitter G2 or G5 certificate is preferred.
10. Must be experienced and qualified in the operation, maintenance and repair of natural gas heating, air conditioning, ventilation, automatic controls and high pressure (natural gas, air), distribution systems. Demonstrated ability to repair and maintain various types of equipment and buildings.
11. Demonstrated knowledge of asbestos awareness and removal.
12. Must have knowledge of appropriate authority safety rules.
13. Must be able to work with minimum supervision.
14. Ability to coordinate and relate well with professionals and non-professionals within and outside the organization.
15. Must be able to communicate effectively, both verbally and in writing.
16. Must be a logical thinker who can work under time sensitive deadlines and have the ability to work with little supervision.
17. A valid Ontario Gas Fitter G2 or G6 certificate is preferred.
18. Must have a valid Class "G" driver's Licence and the provision of a car by individual for use on the job.

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