

# HVAC Systems Technician Tompkins County

**Department:** Facilities  
**Classification:** Competitive  
**Labor Grade:** Blue Collar Grade 13  
**Approved:** Reclass 3/11/02  
**Revised:** 3/11/02 from Mech. Sys. Tech;1/04; 1/19  
**By:** AF Commissioner of Personnel  
**BBP Risk Factor:** no risk

## **MINIMUM QUALIFICATIONS:**

- a) Graduation from a regionally accredited or New York State registered two-year college, university, or technical school with an Associate's Degree or certificate in air-conditioning, heating, and refrigeration technology or a closely related field and five (5) years of full-time paid experience in the installation, maintenance, repair, and operation of complex commercial, industrial, and/or institutional HVAC, plumbing, electrical, and controls systems, six months of which must have been in a supervisory capacity;  
OR
- b) Graduation from high school or possession of a high school equivalency diploma plus completion of an apprentice program and possession of journeyman certification, and a minimum of seven (7) years of full-time paid experience in the installation, maintenance, repair, and operation of complex commercial, industrial, and/or institutional HVAC, plumbing, electrical, and controls systems, six months of which must have been in a supervisory capacity; OR
- c) Any combination of training and experience equal to or greater than that described in (a) and (b) above as determined by the Commissioner of Personnel.

## **SPECIAL REQUIREMENTS:**

The applicant will possess a valid NYS Driver's License with a good driving record at the time of application and maintain such license for the duration of employment.

Candidate should possess a record of on-going training and a Universal EPA CFC certification at time of appointment.

Possession of Boiler Certificate within one year of appointment.

Tompkins County is Committed to Equity and Inclusion. We encourage those with similar values to apply.

**NOTE:** Five years of hands-on experience in the HVAC field will be considered equivalent to the journey level of experience specified in (b) above. This means that an applicant who does not have Journey level certification must have at least 12 years of experience in the field, with at least six months of the experience being supervisory.

## **DISTINGUISHING FEATURES OF THE CLASS:**

This is a highly skilled technical service position in which the incumbent installs, repairs, maintains, and operates all HVAC, plumbing, controls, electrical, and related systems located in County-owned buildings to insure efficient and reliable operation. Employees of this class work on minor or major repairs, installations and maintenance projects. The work is performed under the general supervision of the Assistant Facilities Manager with leeway allowed for independent judgment and decision making. Direct supervision may be exercised over the work of maintenance personnel, cleaning personnel, laborers, contractors, or others in the accomplishment of mechanical, plumbing, and/or control systems projects. The incumbent will perform other maintenance-related work as required.

## **TYPICAL WORK ACTIVITIES:**

- Installs, maintains, repairs, troubleshoots, and/or operates boilers, chillers, cooling towers, air conditioning systems, air handling systems, heat pumps, variable air volume systems, ventilation systems, ductwork, heat exchangers, air compressors, motors, pumps, control systems (pneumatic & direct digital control), computer hardware for control systems and all other associated HVAC equipment and components;

- Installs, maintains, repairs, troubleshoots plumbing systems including, but not limited to, storm water, sanitary drainage, water supply, and natural gas piping systems; plumbing fixtures, automatic sprinkler systems, backflow prevention devices, and other associated systems;
- May install, maintain, repair, and troubleshoot a variety of electrical equipment including, but not limited to, generators, switchboards, panelboards, disconnects, signal equipment, storage battery systems, lighting circuits, lighting fixtures, and associated equipment;
- Repairs steam, water, glycol, and refrigerant leaks on piping, valves, fittings, coils, etc.;
- Evacuates and recharges refrigerant in HVAC equipment;
- Monitors Building Automation System (BAS) control stations, responds to alarms, and revises BAS controls points as needed;
- Updates, and maintains computerized maintenance management system (CMMS) for all systems and equipment under the employee's charge;
- Commissions HVAC, plumbing, controls, and other building related systems prior to occupancy;
- Calibrates and adjusts pump controls, thermostats, sensors, damper motors, actuators, energy management panels, belts, and motors to adequately maintain building comfort levels throughout the heating and cooling seasons;
- Performs preventive maintenance to HVAC systems and auxiliary equipment by lubricating, changing oil, filters, belts, bearings, couplings, etc.;
- Responds to maintenance work requests and customer complaints and inquiries;
- Investigates and recommends new techniques for installations and repairs;
- Identifies, suggests, and implements energy conservation measures;
- Tests and treats water used in air conditioning and boiler systems in order to prevent growth of fungi and bacteria, and control corrosion;
- Unclogs sinks, toilets, floor drains, roof vents, and piping using drain cleaning machines;
- Maintains appropriate records, reports, operating logs, and documents for all mechanical, plumbing, and controls equipment and systems under the employee's charge;
- Interprets mechanical and electrical schematics as needed.
- Assists in planning and scheduling major preventive maintenance projects and repairs for building mechanical, plumbing, electrical, and control systems and equipment;
- Assists in planning, coordinating, or supervising the work of maintenance or cleaning personnel, mechanical or plumbing contractors, or other trades when required in the completion of projects under the employee's charge;
- Assists in supervising and training apprentices when required;
- Assists in conducting, and/or oversees training activities concerning preventive maintenance, and HVAC, plumbing, and controls equipment operation & maintenance;
- Assists in conducting periodic inspection of the condition of building mechanical, plumbing, controls, and electrical systems to ascertain maintenance needs and make recommendations for capital improvement projects and/or major repair, replacement, or renovation projects;
- Assists in the preparation of work schedules and estimates of cost, material, equipment, and resources for minor and major installation, maintenance, and repair projects for approval by Assistant Manager
- Assists in providing information on maintenance work to be performed and may assist in the preparation of an annual budget for maintenance activities related to mechanical, plumbing, and control systems;
- Balances water and air systems;
- Acquires and maintains licenses or special knowledge to maintain specialized equipment as required;
- Performs on-call duties as needed, responding to system emergencies after hours and on weekends;
- Required to access crawl spaces, attics, mechanical rooms, tunnels, pits, sub basements, and confined and isolated areas;
- Maintains hand tools and other diagnostic equipment needed to perform job duties;
- Maintains shop, tools, and parts inventory and makes needs known to appropriate staff;
- May operate equipment for snow removal and grounds maintenance;
- Performs other duties and responsibilities as assigned;

#### **KNOWLEDGE, SKILLS, ABILITIES, AND PERSONAL CHARACTERISTICS:**

- Thorough knowledge of the installation, repair, maintenance, and operation of HVAC, plumbing, controls, and related systems;
- Thorough knowledge of the principles, practices, terminology, and safety precautions used in the operation and maintenance of large complex HVAC and plumbing systems, auxiliary equipment and controls;
- Good knowledge of the methods, materials, and diagnostic tools and equipment used in the operation, maintenance, and testing of large complex HVAC and plumbing systems, auxiliary equipment and controls;
- Good knowledge of refrigerant usage and safe storage practices;
- Good knowledge of the practices, tools, and terminology of the electrical, carpentry, and painting trades;
- Working knowledge of code, life safety, and indoor air quality issues as it relates to HVAC and plumbing work;

- Working knowledge of CMMS, and BAS applications;
- Ability to analyze, diagnose, troubleshoot, and problem solve complex technical problems, and develop solutions to problems as they arise;
- Ability to effectively service multiple sites and projects concurrently;
- Ability to plan, coordinate, and supervise the works of others;
- Ability to re-prioritize workload to accommodate schedules and other emergencies;
- Ability to understand and carry out oral and written directions;
- Ability to read and interpret technical manuals, wiring and piping schematics, mechanical and architectural plans, and specifications;
- Ability to work cooperatively and effectively with management and staff of the various county departments, service providers, vendors, and to deal with service requests courteously, tactfully, and professionally;
- Willingness to respond to emergencies;
- Ability to use video display terminals to manage and update building operating systems (i.e., BAS);
- Ability to develop and maintain cost, inventory, maintenance, equipment, and work order records using computer programs (i.e., Excel, Datastream MP2);
- Ability to work under adverse conditions - risk exposure to asbestos, toxic vapors, heat, cold, height, and accumulated dust;
- Dependability, initiative, resourcefulness, and good judgment are required;
- Physical condition commensurate with the demands of the position (i.e., ability to lift 70 lbs.);
- Ability to ascend and descend heights (i.e., climb stairs and ladders, personnel lifts, etc.) and have agility and freedom of movement;
- Ability to move easily in confined spaces. Must be able to wear a respirator;
- Ability to add, subtract, multiply, and divide as used in mathematical formulas;
- Possess strong customer service skills;
- Possess a working knowledge of computers;

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