RIALTO UNIFIED SCHOOL DISTRICT
CLASSIFIED

ENERGY MANAGEMENT TECHNICIAN

DEFINITION:

Under the direction of an assigned Administrator or Supervisor, provides highly skilled technical support, program analysis, and programming for the campus computerized HVAC systems. Responsibilities include installation and commissioning of new hardware points in existing microprocessor control devices, alarm analysis and follow-up, troubleshooting hardware problems within the EMS network, and replacement of faulty components and devices. This classification uses operator workstations, terminals, local LED display monitors to monitor the network and adjust set points as needed. Programs and supports non-EMS microprocessor-based control systems and devices, such as variable speed drives, self-contained environmental systems, chiller controls, and other systems which interface with EMS. Performs complex technical work on a journeyman level in the installation, operation, maintenance, modification, overhaul, services, and repair of sophisticated automatic electronic, and electrical control systems equipment that operate heating, ventilation, air conditioning, fire protection, and other utility and environmental control systems. Perform other job-related duties as assigned and/or as required.

ESSENTIAL DUTIES:

- Perform highly skilled technical support of microprocessor, analog, and electro-hydraulic control devices by installing, commissioning, maintaining, repairing, and replacing such devices according to design drawings and/or specifications, providing alarm analysis and follow-up, troubleshooting hardware problems, and repairing and replacing control modules, I/O interface boards, relays, PLCs, power supplies, etc.
- Perform journeyman level heating, ventilation and air conditioning (HVAC) work in the installation, operation, maintenance, modification, service and repair of electric, electronic, electro-magnetic mechanical control systems including high and low pressure refrigerant systems.
- Assists to ensure that HVAC control systems operate in the intended manner to use energy efficiently by programming system parameters to meet objectives, adjusting set points, monitoring the network, and calibrating instrumentation, metering, valves, dampers, actuators, controllers as required. Supports the use of control systems to meet energy savings and comfort objectives by assisting in the development and implementation of control software for microprocessor-based control systems and developing and implementing operator control interface screens and panels.
- Coordinates with HVAC technicians to inspect and test high/low-pressure refrigerant systems to locate and diagnose faults and malfunctions, performs required repairs through replacement of inoperative parts or adjustment of thermostatic controls and blowers, and provides an estimate of repair (and/or replacement) costs.
- Maintain and repair all control and instrumentation such as transmitters, valve/damper actuators, servo-valves, solenoids, thermocouples, pressure/temperature gauges, chart recorders, data loggers, alarm annunciators, variable speed drives and ramp starters for electric motors and level indicators.

- Ensure that HVAC systems provide an appropriate working environment for district sites by troubleshooting, maintaining, repairing, and modifying secondary refrigerant systems including pumps, valves, cooling, air moving equipment and local temperature/pressure controls.
- Provide technical advice to the assigned Administrator or Supervisor, on the selection of complex and up-to-date instruments and controls used in heating, ventilation, and air conditioning systems as well as fire protection systems by assessing the interchangeability and integrative ability of manufacturers assemblies, sub-assemblies, and components with existing as well as potential replacement requirements of HVAC and fire protection systems.
- Contributes to efficient and effective HVAC operations by advising the assigned Supervisor on the quantity and types of materials that should be ordered and stocked for use in heating, ventilation and air conditioning (HVAC) projects, coordinating with others on projects and maintenance, preparing material lists, reviewing inventory needs, reviewing schematics, construction drawings, and equipment manuals and assisting in maintaining maintenance records.
- Maintain maximum system efficiency by installing sensing and switching devices designed to control the flow and temperature of air, steam, water, and gasses and servicing, maintaining, and adjusting electric, pneumatic, electro-magnetic, and mechanical control systems and their components.
- Assists the assigned Supervisor in developing an effective and efficient mechanical unit by training other mechanical personnel in testing and calibration of all instruments and control devices.
- Minimizes institutional liability regarding the districts compliance with federal regulations by complying with policies, laws, and regulations governing environmental protection, hazardous waste disposal, and the use of chemical substances and materials, utilizing specialized equipment in the recovery and recycling of regulated refrigerants, and maintaining records of refrigerant recovery-recycling activities as required by the Environmental Protection Agency (EPA).
- Provides technical assistance on the purchase of new or replacement microprocessor-based, analog, and electro-hydraulic control systems and mechanical equipment or systems by reviewing and preparing equipment specifications and advising the Maintenance Supervisor on equipment capability and compatibility, installation requirements and costs, and potential operations and maintenance expenses.
- Assists the Maintenance Supervisor with ensuring that contracted control system services and/or heating, ventilation and air conditioning services meet specified results and/or work orders thus minimizing future operational problems. Advise the Maintenance Supervisor when contracted services fail to meet specifications.
- Promotes preventive maintenance as a strategy in maintaining electronic test equipment and mechanical tools by keeping accurate records on equipment indicating all required and performed maintenance. Perform spot checks of equipment to determine working condition. Schedule periodic cleaning and servicing of tools and equipment.
- Drive a service vehicle to various sites to conduct work.
- Perform other job-related duties as assigned and/or as required.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:

- Methods, materials, tools, and equipment used in the maintenance and repair of heating, ventilation, air conditioning and refrigeration systems and equipment.

- A working knowledge of microprocessor-based distribution control systems and protocols.
- Principles of thermodynamics and understanding of high-and low-pressure components.
- Building codes, policies, regulations, and guidelines pertaining to typical school district refrigeration, ventilation, heating and large air conditioning systems, E.M.S and V.V.T. systems.
- Safe working methods and procedures.
- OSHA and South Coast Air Quality regulations.
- Operation and maintenance of tools, equipment and machinery used in HVAC & R maintenance and repair.
- Operation of a computer and assigned software.
- Proper methods of storing equipment, materials, and supplies.
- Training principles and techniques.
- Electrical control systems including energy management systems (EMS).
- Arithmetic computations.
- Oral and written communication skills.
- Recordkeeping techniques.

ABILITY TO:

- Perform skilled work in the inspection, servicing, overhauling, installation, maintenance and repair of heating, ventilation, air conditioning and refrigeration systems for designated buildings and facilities.
- Troubleshoot and diagnose HVAC & R device, system, and equipment malfunctions.
- Install, adjust, program, replace and repair Energy Management Systems (EMS).
- Work from blueprints, shop drawing, sketches, manuals, and diagrams.
- Plan, lay out and coordinate the work of others, effectively and efficiently.
- Operate and maintain tools, equipment and machinery used in the HVAC & R trade.
- Estimate labor and material costs accurately.
- Train, coordinate, organize and direct the work of assigned maintenance employees.
- Maintain simple records and logs.
- Maintain and prepare complete and concise operational reports.
- Understand and carry out oral and written directions.
- Establish and maintain cooperative working relationships.
- Observe health and safety regulations and procedures.
- Make accurate arithmetic calculations.
- Communicate effectively, both orally and in writing.
- Work independently with little direction.

EDUCATION AND EXPERIENCE:

EDUCATION:

Verification of an A.A. degree, or a higher degree; or 48 semester hours of college coursework; or 24 semester hours of college coursework and six (6) years of experience as a journey level air conditioning and heating maintenance technician.

EXPERIENCE:

Five years of experience as a journey level air conditioning and heating maintenance technician in the commercial or industrial field. Recent job-related experience within the last five years is required.

LICENSE, CERTIFICATIONS AND OTHER REQUIREMENTS:

- Verification of a valid California Motor Vehicle Operator's License
- Insurability by the District's liability insurance carrier is required.
- Possession of E.P.A. Universal Technician Certificate.

PREFERRED QUALIFICATIONS:

Supplemental training or course work in the maintenance and repair of modern refrigeration, ventilation, heating, and commercial air conditioning equipment is desirable, but not required.

WORKING CONDITIONS:

ENVIRONMENT:
Indoor and outdoor work environment. Driving a vehicle to conduct work.

PHYSICAL ELEMENTS:
The physical requirements indicated below are examples of the physical aspects that the position classification must perform in carrying out essential job functions:

- Will often exert 75 to 100 pounds of force to lift, carry, push, pull, or otherwise move objects.
- Will involve walking or standing for extended periods of time, but will sit for brief periods; will occasionally be required to bend, stoop, crouch, kneel, reach above shoulder level, and/or to ascend and descend ladders, stairs, scaffolding and ramps.
- Must possess the ability to hear and perceive the nature of sound.
- Must possess visual acuity and depth perception.
- Must be capable of providing oral information, both in person and over the telephone.
- Must possess the manual dexterity to operate business-related equipment and to handle tools, various objects and materials.
- Exposure to hot, cold, wet, humid, or windy conditions caused by weather may occasionally be experienced.

Reasonable accommodation may be made to enable a person with a disability to perform the essential functions of the job.

POTENTIAL HAZARDS:
Working around and with machinery having moving parts. Exposure to hazardous chemicals. Regular exposure to fumes, dust, dirt, oil/grease. Working at heights. Electrical power supply and high voltage. Working in a cramped or restrictive work chamber.

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