



Office of Human Resources  
Building Engineer I - CJ2732  
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### General Statement of Duties

Performs journey technical level work in the daily operation of automated and mechanical environmental control systems, monitoring power supply systems, and performs general building and facility maintenance and repairs.

### Distinguishing Characteristics

This class is distinguished from other trades areas by the specialty of the work and minimum qualifications. This class is part of the Building Engineer trades job family with increasing responsibility on building systems in city facilities. This class is part of a trades class series. All levels are not required to be used within any one agency or department and assignment of a classification depends on the duties and responsibilities of the position. In addition to increasing levels of experience required at each level, Level I trade classifications perform journey/full performance level work in the assigned trade area and comprises a majority of positions. Level II trades classifications perform specialized and expert level journey work in assigned trades area, represents the agency/department on large and complex projects, and/or may have necessary licensure/certification and are required to pull building permits. Generally, there are less positions at this level than at level I. Finally, Lead Level performs permanently assigned lead work over lower level staff and performs the duties of Level I or Level II. There should be few positions assigned to this classification.

### Essential Duties

Maintains and operates automated and mechanical environmental control systems, which includes monitoring and programming master controls, calibrating and coordinating sequencing of controls, overseeing and monitoring power supply systems, troubleshooting and diagnosing systems errors, and making corrections in order to maintain building and facility temperatures and environmental conditions.

Maintains, operates, and repairs building and facility equipment related to environmental control systems, which includes electrical and mechanical components, plumbing and sewage systems, heating and air conditioning systems, ventilation and air handling systems, cold and hot water systems, electrical and fuel operated generators, which includes fire protection and detection systems.

Performs routine preventative maintenance based on operating procedures and regularly scheduled maintenance activities of equipment, and regularly inspects facilities, buildings, and grounds for unsafe or malfunctioning systems and conditions.

Assist other trades personnel in the maintenance and repair of building and facility infrastructure and equipment, which includes the installation and modification of equipment.

Plans and coordinates the maintenance and installation of major building and facility equipment repairs and related activities within a variety of specific trades areas, which includes the evaluation and recommendation of service upgrades.

Responds to building and facility tenant complaints with regard to safety issues and environmental control conditions, which includes following up on work orders, and prioritizing service calls.

Assists in coordinating maintenance efforts with outside contractors and technicians with regard to contracted service agreements.

Provides input to supervisors and managers responsible for planning and controlling annual budgets.

Orders parts and supplies as required and maintains stock and inventory control.

Operates and maintains tools and equipment common to various skilled trades.

Maintains records and prepares reports, which includes estimating materials, labor, and equipment costs.

Adheres to and observes all common safety practices and operating procedures.

By position, may be required to be on-call to address emergent needs.

By position, performs snow removal duties.

By position, responds to afterhours calls or emergency calls outside of normal scheduled or business hours.

Performs other related duties as assigned.

Employees may be re-deployed to work in other capacities in their own agencies or in other City agencies to support core functions of the City during a City-wide emergency declared by the Mayor.

Any one position may not include all of the duties listed. However, the allocation of positions will be determined by the amount of time spent in performing the essential duties listed above.

### **Competencies**

Customer Service - Works with customers to assess needs, provides assistance, resolves problems, and satisfy expectations, knows products and services, and is committed to providing quality products and services.

Oral Communication - Expresses information to individuals or groups effectively; taking into account the audience and nature of the information; makes clear and convincing oral presentations; listens to others, attends to nonverbal cues and responds appropriately.

Reading – Understands and interprets written material, including technical materials, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.

Technical Competence – Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Technical Problem Solving – Troubleshoots, diagnoses, analyzes, and identifies systems malfunctions to determine the source and cause of the problem.

Written Communication – Composes, reviews, edits, and issues written materials for diverse audiences and communicates purpose in a succinct and organized manner that is appropriate for context, time, and place.

### **Knowledge & Skills**

Knowledge of engineering concepts, principles, and practices, and of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications.

Knowledge of principles and methods for operating industrial equipment.

Knowledge of materials, methods, and the appropriate tools to construct objects, structures, and buildings.

Knowledge of machines and tools, including their designs, installation, uses, repair, and maintenance.

Knowledge of developing, producing, understanding, and using plans, blueprints, models, and maps, including the use of tools and instruments to produce precision technical drawings.

Knowledge of electrical equipment, components, instruments, and burglar and fire alarm systems including installation, testing, uses, repair, and maintenance.

Knowledge of electronic theory, circuits, components, and material properties (excluding computers).

### **Level of Supervision Exercised**

By position, performs lead work.

### **Education Requirement**

Graduation from high school or the possession of a GED, HiSET or TASC Certificate.

### **Experience Requirement**

Three (3) years of experience in building operations, engineering and equipment and systems maintenance.

### **Education & Experience Equivalency**

A combination of appropriate education and experience may be substituted for the minimum education and experience requirements.

### **Licensure & Certification**

This job requires driving. Requires a valid Driver's License at the time of application.

By position, requires a valid Commercial Driver's License (CDL "B") with appropriate endorsements by the end of probation.

By position, requires either a valid journey certificate of qualification or equivalency as required in trades specialty issued by the City and County of Denver or a valid journey license issued by the State of Colorado by the end of probationary period.

Licenses and certifications must be kept current as a condition of employment.

### **Working Environment**

Atmospheric Conditions: conditions that affect the skin, eyes or respiratory system.

Potential exposure to cold temperature, cold enough to cause bodily discomfort

Potential exposure to cold weather conditions (indoor/outdoor)

Potential exposure to conditions that affect the skin or respiratory system.

Potential exposure to dust

Potential exposure to extreme temperature changes

Potential exposure to hazardous anesthetic agents, body fluids, and bio-wastes

Potential exposure to hazardous conditions where there is a danger to life, body, and/or health

Potential exposure to hazardous/toxic chemicals

Potential exposure to hazards from electro/mechanical/power equipment.

Potential exposure to hazards of steam and heat

Potential exposure to heat temperatures, hot enough to cause bodily discomfort

Potential exposure to hot and humid work environment

Potential exposure to humid conditions with high moisture content to cause bodily reactions

Potential exposure to infection from disease-bearing specimens.  
 Potential exposure to infections and contagious diseases  
 Potential exposure to odorous chemicals  
 Potential exposure to the risk of blood borne diseases.  
 Potential exposure to temperature changes: variations in temperature from hot too cold  
 Potential exposure to toxic chemicals.  
 Potential exposure to unpleasant elements (accidents, injuries, and illness).  
 Extreme cold conditions  
 Handles emergency or crisis situations  
 Noise sufficient to cause distraction or possible hearing loss  
 Personal Safety: aware of surroundings, people, and events  
 Pressure due to multiple calls and inquiries  
 Subject to burns and cuts  
 Subject to electrical and radiant energy hazards  
 Subject to hazards of flammable or explosive gases  
 Subject to injury from moving parts of equipment or vehicles  
 Subject to precarious or high locations  
 Subject to pressure for multiple calls, inquiries, and interruptions  
 Subject to varying and unpredictable situations  
 Subject to vibrations and strain on the body to cause bodily harm if endured daily  
 Temperature Changes: variations in temperature from hot too cold.  
 Temperature Changes: variations in temperatures from hot too cold when works in field  
 Wet: frequent contact with water, liquid, chemicals, or sanitary sewage  
 Works in confined, uncomfortable or awkward locations  
 Works in precarious or high locations.

### Level of Physical Demand

3-Medium (20-50 lbs.)

### Physical Demands

(Physical Demands are a general guide and specific positions will vary based on working conditions, locations, and agency/department needs).

Agility: Ability to move quickly and easily.  
 Balancing: Maintaining equilibrium.  
 Carrying: Transporting or moving an object.  
 Climbing: Ascending or descending an object or ladder.  
 Color vision: Ability to distinguish and identify different colors.  
 Crawling: Moving about in a low or crouched position.  
 Crouching: Positioning body downward and forward.  
 Depth Perception: Ability to judge distances and space relationships.  
 Eye/Hand/Foot Coordination: Performing work through using two or more body parts or other devices.  
 Feeling: Perceiving attributes of objects by means of skin receptors, communication, or otherwise.  
 Field of Vision: Ability to sharply detect or perceive objects peripherally.  
 Fine Dexterity: Sufficient coordination to operate a vehicle and manipulate objects.  
 Fingering: Picking and pinching, through use of fingers or otherwise.  
 Handling: Seizing, holding, grasping, through use of hands, fingers, or other means.  
 Hazards: Conditions where there is danger to life, body and/or health.  
 Hearing: Perceiving and comprehending the nature and direction of sounds.  
 Hearing/Talking: Perceiving and comprehending the nature and direction of sounds/ability to communicate ideas.  
 Hiking: Moving about on uneven surfaces, and at high altitude.  
 Jogging: Ability to transport oneself over a two-mile distance at an efficient speed.

Kneeling: Assuming a lowered position.

Lifting: Moving objects weighing no more than 50 pounds from one level to another.

Neck Flexion: Perceiving objects located above or below.

Oral Comprehension: Ability to discern the meaning of oral speech.

Physical Strength: Exerts force to transport objects of 50 pounds or more.

Pulling: Exerting force upon an object so that it is moving to the person.

Pushing: Exerting force upon an object so that it moves away from the person.

Reaching: Extending the hands and arms or other device in any direction.

Repetitive motions: Making frequent or continuous movements.

Running: Quickly traverse a distance of over 50 yards.

Running: Quickly traverse a distance of under 50 yards.

Running: Ability to quickly pursue an animal for 60 seconds.

Sitting: Remaining in a stationary position.

Stamina: Ability to work over long periods of time without tiring.

Standing: Remaining in a stationary position.

Stooping: Positioning oneself low to the ground.

Talking: Communicating ideas or exchanging information.

Vision: Ability to perceive animal behavior, comprehend signs, and detect color.

Vision Far Acuity: Ability to perceive or detect objects clearly at 20 feet or more.

Vision Near Acuity: Ability to perceive or detect objects at 20 inches or less.

Walking: Ability to move or traverse from one location to another.

Written Comprehension: Ability to discern the meaning of written words.

### Background Check Requirement

Criminal Check

Employment Verification

Motor Vehicle Record

By position, License/Certification

### Assessment Requirement

None

### Probation Period

Six (6) months.

### Class Detail

**Pay Grade: NE-16**

**FLSA Code: N**

**Established Date: 7/4/2021**

**Established By: BM**

**Revised Date:**

**Revised By:**

**Class History:**