

**COMPETENCY MODEL FOR
BUILDING OPERATING ENGINEER
CLASS CODE 5923**

The following competencies have been identified as those that best separate superior from satisfactory job performance in the class of **BUILDING OPERATING ENGINEER**.

- 8. Safety Focus
- 16. Objectivity
- 20. Job Knowledge
- 23. Equipment Operation
- 24. Mechanical Aptitude
- 26. Electrical Understanding
- 33. Interpersonal Skills
- 34. Customer Service
- 35. Teamwork

On the following pages are descriptions of each competency, including a definition, the level of the competency required for the class (*italicized and underlined*), examples of behavioral indicators, and satisfactory and superior performance levels

8. SAFETY FOCUS – Performs work in a way that minimizes risk of injury to self or others.

Level of Competency Required by Job:

Level 1: Maintain awareness of unsafe conditions and actions to avoid injury.

Level 2: Follow safety rules/procedures; avoid known hazards in the work environment.

Level 3: Carefully follow safety rules and procedures and consistently use all necessary safety equipment.

Examples of Behavioral Indicators:

- Wears seat belt.
- Ensures safe physical work environment by taking actions such as eliminating unstable stacks of materials, closing drawers so filing cabinets will not tip over, and keeping pathways clear of tripping hazards.
- Reviews safety procedures before beginning each job with known hazards.
- Follows safety procedures while performing work even when it takes more time.
- Uses safety equipment such as goggles, gloves, and earplugs as required or warranted.
- Frequently checks safety equipment for proper condition and operation.

Performance Levels:

Satisfactory

Maintains awareness of personal safety to avoid injury or property damage during all work activities.

Superior

“Safety first.” Places avoidance of injury or property damage above all other job requirements. Mentions the need to follow safe work practices to co-workers. Actively seeks ways to avoid injury.

16. OBJECTIVITY – Demonstrates fairness and equity toward others; understands different perspectives; states sides of a conflict non-evaluatively; uses facts and logic.

Level of Competency Required by Job:

Level 1: Respond to the situation at hand and its specific circumstances as opposed to being influenced by previous encounters, stereotypes, or biases.

Level 2: Appropriately aligns self/organizational interest with objectives to benefit the overall organization and/or citizenry.

Level 3: Appropriately aligns self/organizational interest with the “common good” (citizens, other public sector agencies, elected officials).

Examples of Behavioral Indicators:

- Notes facts and circumstances specific to the situation.
- Formulates plans for action based on the totality of factual information.
- Gives full attention to each task/issue within areas of responsibility
- Clearly demonstrates the benefits of actions to the overall organization, citizens, and/or the “common good.”
- Does not take positions or promote actions/causes that reflect blatant self-interest.

Performance Levels:

Satisfactory

Focuses on and reacts to all facts and information available for each situation/issue. Disregards personal preferences or biases in appraisal of situation/issue and response to it.

Superior

Strives to serve the “common good.” Responds in a manner contrary to self-interest when appropriate.

20. JOB KNOWLEDGE – Knows information required to perform a specific job. Includes both widely available courses of study (for example, chemistry, human resources management, graphic arts) and City-specific information (parking regulation and ticketing practices; purchasing procedures; provisions of the City Charter).

Level of Competency Required by Job:

Level 1: Knowledge is concrete, factual, and/or procedural and may be defined by the organization. Situations in which it is applied are quite consistent.

Level 2: Knowledge is substantive and may be defined by an external trade, field, or profession. Situations in which it is applied vary and, as such, require breadth and depth of understanding.

Level 3: Knowledge is abstract, conceptual, and/or complex and may be supported by a well-defined academic discipline or authoritative sources (e.g., laws, ordinances, government guidelines/regulations/codes). Situations in which it is applied may vary greatly or be novel.

Examples of Behavioral Indicators:

- Performs work correctly/avoids technical (job content related) errors.
- Answers technical questions about work accurately.
- Asks few technical questions about the performance of routine work activities.
- Offers advice (“coaching”) to new employees regarding their work.
- Develops training programs for other employees.
- Sought out as a source of information by others.

Performance Levels:

Satisfactory

Sufficient job knowledge to perform work correctly independently. Answers technical questions about work correctly.

Superior

Expertise in technical job information sufficient to serve as a resource for others. May develop training manuals/programs and/or give internal and/or external presentations related to work.

JOB KNOWLEDGE AREAS

1. Knowledge of the operating principles and construction of oil and gas fired boilers and related auxiliary equipment including steam, high pressure, hot water and waste-heat boilers such as exhaust gas flow patterns, burner mounts, safety devices, fire box lining, gas passes, and water flow patterns at a level sufficient to understand their basic and safe operation including start up and shut down.
2. Basic knowledge of the methods and practices used in cleaning and maintaining oil, gas fired, and waste-heat boilers, and related auxiliary equipment including: burner tips, water tubes, forced draft fans, safety valves, and low level water cut-outs such as enclosed space entry safety procedures, sufficient to maintain their continued operation, prevent breakdowns, and pass safety inspections.
3. Knowledge of the principles and practices of air conditioning plant, cooling tower, and air handling unit operation and maintenance such as manual, mechanical, and chemical methods for tube cleaning, and the detection of failing bearing and fan belts sufficient to ensure their continuous operation.
4. Knowledge of the operating principles of compressed air system service and control including pressure regulators, air control valves, driers, safety devices, and valve replacement techniques sufficient to operate, maintain, and repair as necessary.
5. Knowledge of emergency generator operation sufficient to run the equipment when necessary.
6. Knowledge of water treatment processes including proper chemical use and handling, interpretation of test results, and proper dosage of chemicals to add as a result of readings.
7. Ability to monitor equipment in a way which distinguishes normal from abnormal operations using signs such as equipment readings, vibration, sound, temperature, and leaks in order to detect problems at an early stage.
8. Knowledge of electricity principles such as wiring and connections at a level sufficient to work on electrical equipment in safety and without causing equipment damage.
9. Ability to use hand and power tools such as grinders, drills, and pneumatic tools used in the maintenance and repair of building operating equipment.
10. Ability to use a synchroscope in order to monitor the operation of co-generation equipment or emergency generators.
11. Knowledge of safe working procedures contained in department, city, and state regulations including proper tool use and wearing proper personal protective equipment (i.e., PPE) sufficient to work safely and in compliance with regulations.
12. Ability to read and interpret information from online computer print-outs such as alarm signals, equipment malfunctions, temperature readouts, and other systems data in order to diagnose and properly respond to potential problems.

13. Ability to read and interpret instrument readings from boilers, air conditioning equipment, pumps, compressors, and related equipment in order to diagnose problems and take appropriate, timely action.
14. Ability to read and understand manufacturers' manuals and brochures of instructions used in the repair and operation of equipment.
15. Ability to read schematic diagrams and drawings of equipment in order to use them when necessary to maintain or repair equipment.
16. Knowledge of arithmetic (addition, subtraction, multiplication and division) sufficient to make calculations of fuel use, power, water consumption, and BTUs.
17. Ability to communicate orally with co-workers, craft and security personnel, tenants, and the public by asking relevant questions, being concise, and responding with accurate information.
18. Ability to use interpersonal skills such as courtesy, tact, and an even temper when communicating with co-workers, supervisors, the public, tenants, and security personnel.
19. Ability to use good judgment including: consideration of the effect actions will have on operations, the public, and equipment when confronted with emergency or non-routine situations.
20. Ability to write brief notes in the daily log which are legible, accurate, and clear including problems occurring on shift and equipment operation information.
21. Knowledge of hazards and safety precautions involved in high pressure boiler operation.
22. Knowledge of fire alarm systems, fire pumps, and emergency generator operation sufficient to run the equipment when necessary.
23. Knowledge of operation of computer based building control systems sufficient to perform trouble shooting.
24. Knowledge of problems involved in building operations.
25. Ability to interpret trouble calls and make appropriate corrective decisions.
26. Ability to analyze indications of building system problems and anticipate malfunctions to determine preventive action.
27. Ability to inspect building equipment and determine maintenance and repair needs, estimate time, cost, and materials, and plan and schedule work.
28. Ability to inspect contract repair work on building service equipment for conformance to specifications.
29. Ability to read blueprints and make drawings of layouts.

30. Ability to keep operating and maintenance reports; prepare rough specifications for tools, materials, and supplies.
31. Ability to prepare elevator and escalator operation schedules for a large building.
32. Knowledge of basic computer operating systems (e.g., Windows) and Microsoft Office applications (e.g., Word, Excel, and Outlook) utilized on the job.

23. EQUIPMENT OPERATION – Operates specialized equipment in performance of job duties.

Level of Competency Required by Job:

Level 1: Operate equipment based on on-the-job training.

Level 2: Operate equipment based on attendance at a training program and practice.

Level 3: Operate equipment for which in-depth, complex training was required and which may require certification.

Examples of Behavioral Indicators:

- Operates equipment proficiently.
- Operates equipment with strict adherence to safety procedures.
- Understands the operation of equipment used on the job and correctly answers questions about it.
- Willingly participates in any training necessary to maintain up-to-date knowledge of equipment operation.

Performance Levels:

Satisfactory

Operates equipment safely and with a high degree of proficiency.

Superior

Operates equipment with extreme proficiency and correctly answers questions about its operation. Trains and/or coaches others in the operation of equipment.

24. MECHANICAL APTITUDE – Accurately predicts the impact of forces on objects and assesses the behavior of other physical phenomena (e.g., volume, weight, velocity). Readily learns work involving the application of mechanical principles.

Level of Competency Required by Job:

Level 1: Maintain a safe work environment by ensuring objects in it are stable, tools and equipment are properly used.

Level 2: Know the physical properties of objects in the work environment and correctly anticipate the action of forces upon them; performs work accordingly (correctly and safely).

Level 3: In-depth understanding of mechanical and physical phenomena sufficient to design and/or oversee the construction of systems.

Examples of Behavioral Indicators:

- Recognizes the impact of an earthquake on objects in the work environment and re-arranges them as possible to avoid possible damage or destruction and potential to cause injury.
- Uses tools properly to accomplish work correctly and safely.
- Recognizes the effects of various actions on objects and performs only those actions that will accomplish intended result and will not cause property damage or injury.
- Systems designed and/or for which construction is overseen operate as intended upon completion.

Performance Levels:

Satisfactory

Recognizes the operation of mechanical/physical phenomena sufficient to readily learn and perform work of a mechanical nature.

Superior

Displays exceptional insight into the operation of mechanical phenomena, and makes correct inferences regarding it. Promptly and accurately troubleshoots problems.

26. ELECTRICAL UNDERSTANDING – Comprehends the concept and the operation of flow of electrical current.

Level of Competency Required by Job:

Level 1: Know the properties of electricity relevant to the work environment and work to be performed in order to correctly perform work and recognize hazards that will be created by the failure to do so.

Level 2: Sufficient understanding of electricity to recognize problems and determine repair needed to prevent disaster/restore operation.

Level 3: In-depth understanding of electrical principles and phenomena sufficient to design and/or oversee the installation of complex electrical systems.

Examples of Behavioral Indicators:

- Ensures safe physical work environment by taking actions such as eliminating exposed electrical wire, faulty connections, empty sockets, and overloaded circuits.
- Recognizes the danger of fire from faulty electrical installations.
- Uses tools, equipment, and instruments properly to accomplish electrical work correctly and safely.
- Systems designed and/or for which installation is overseen perform as intended upon completion.

Performance Levels:

Satisfactory

Understands the operation of electricity sufficient to readily learn and perform electrical work.

Superior

Displays exceptional insight into the operation of electrical systems, and makes correct inferences regarding them. Promptly and accurately troubleshoots problem.

33. INTERPERSONAL SKILLS – Interacts effectively and courteously with others.

Level of Competency Required by Job:

Level 1: Interact with members of the workgroup, supervision, and/or the public in a cordial, service-oriented manner.

Level 2: Interact across department lines and with appointed City officials, and/or members of the public, at times under adversarial circumstances, in a cordial, respectful manner.

Level 3: Interact with appointed and elected City officials, department heads, representatives of external organizations, and/or the media in a cordial, effective manner.

Examples of Behavioral Indicators:

- Works well with others toward mutual objectives.
- Does not arouse hostility in others.
- “Disagrees without being disagreeable.”
- Elicits acceptance/cooperation from others.
- Affords all individuals respect, regardless of their role or status.
- Effectively addresses concerns of politicians or others who may have their “own agenda.”

Performance Levels:

Satisfactory

Behaves in a courteous, respectful, cooperative manner toward co-workers, other City employees, and members of the public.

Superior

Facilitates positive interpersonal relations within/among workgroups and toward members of the public. Adept at finding similarities and grounds for cooperation/mutual benefit.

34. CUSTOMER SERVICE – Interacts with recipients of services (internal or external customers) in a way that provides accurate, timely, and effective information and service

Level of Competency Required by Job:

Level 1: Interact with customers in person, over the telephone, or through email (and/or other electronic media) in order to provide information or assistance. Listen to customer concerns; explain/reconcile information and provide alternatives if possible; facilitate resolution by making referral and/or following-up as necessary.

Level 2: Promotes positive customer service. Serves as a model of providing exemplary customer service.

Level 3: Develop customer-oriented procedures; identifies changes in procedures to enhance customer service and ensures they are implemented.

Examples of Behavioral Indicators:

- Carefully listens to (or reads) customer statement of the issue.
- Provides direct, informative, accurate responses to customer.
- Suggests options if available.
- Maintains a positive attitude in the face of customer complaint or frustration.
- Remains focused on the issue presented by the customer and directs the customer back to the issue if necessary.
- Asks the customer if their concerns have been fully addressed.
- Ensures organizational policies and practices are customer-focused.
- Ensures all employees recognize their responsibility for customer service and are properly trained for it.

Performance Levels:

Satisfactory

Displays knowledge as well as courtesy and patience when interacting with customers. Ensures customers' issue is correctly identified and remains focused on it until it is resolved.

Superior

Seeks further information or advice to resolve difficult issues. Solicits feedback on the effectiveness of service. Makes suggestions for improving service and facilitates changes needed to implement.

35. Teamwork – Interacts effectively with others to achieve mutual objectives; readily offers assistance to others to facilitate their goal accomplishment.

Level of Competency Required by Job:

Level 1: Work effectively as a member of a work unit or project team. Readily offer assistance to others when they have too much work or have too little.

Level 2: Work effectively as a team member in which different people have different roles/responsibilities and perspectives. Identify points for collaboration with co-workers; readily offer and request assistance.

Level 3: Work effectively as a part of an interdependent team (your work gets done only if the work of the whole team is done; evaluation of team performance is more relevant than individual performance).

Examples of Behavioral Indicators:

- Discusses work-related matters with co-workers.
- Offers and requests assistance readily.
- Offers and is receptive to suggestions.
- Identifies problems with workflow that will prevent team from accomplishing its goals.
- Provides constructive criticism and feedback to team members to improve overall functioning of team.
- Assigns credit to team for accomplishments.

Performance Levels:

Satisfactory

Cooperates with co-workers and fulfills responsibilities as a member of a project team. Maintains a focus on common objectives and offers and requests assistance readily.

Superior

Sees the team as a whole; acknowledges that performance of the team is what in reality is evaluated by others. If anyone fails, everyone on the team fails.