

**MICHIGAN CIVIL SERVICE COMMISSION
JOB SPECIFICATION**

PLUMBER

JOB DESCRIPTION

Employees in this job participate in and oversee plumbing installation, repair, and maintenance projects on state properties such as office buildings, prisons, and hospitals.

There are five classifications in this job.

Position Code Title - Plumber-E

Plumber 8

This is the intermediate level. The employee performs plumbing work while learning and developing skills under the direction of a higher-level Plumber.

Plumber E9

This is the experienced level. The employee performs a full range of plumbing work and uses independent judgment in making decisions requiring the application of procedures and practices to specific work situations.

Position Code Title - Plumber-A

Plumber 10

This is the advanced level. The employee functions as a crew leader, overseeing the work of lower-level Plumbers, prisoners, and others, and performs journey-level plumbing assignments.

Position Code Title - Plumber Licensed-E

Plumber-Licensed E10

This is the experienced level. The employee obtains permits and performs a full range of plumbing work as required by law for construction and remodeling projects. The employee uses considerable independent judgment in making decisions without the availability of supervision.

Position Code Title - Plumber Licensed-A

Plumber-Licensed 11

This is the advanced level. The employee obtains permits and performs plumbing work as required by law for construction and remodeling projects, functions as a crew leader overseeing the work of lower-level Plumbers or prisoners, and performs journey-level plumbing assignments.

NOTE: Employees generally progress through this series to the experienced level based on satisfactory performance and possession of the required experience.

JOB DUTIES

NOTE: The job duties listed are typical examples of the work performed by positions in this job classification. Not all duties assigned to every position are included, nor is it expected that all positions will be assigned every duty.

Assembles, installs, and repairs pipes, fittings, and fixtures of heating, water, and drainage systems.

Installs and repairs plumbing fixtures such as sinks, commodes, bathtubs, showers, water heaters, hot water tanks, garbage disposal units, dishwashers, water softeners, water coolers, air conditioners, and radiators.

Installs, maintains, and repairs plumbing lines and fixtures using a variety of hand tools and such special equipment as mechanical and power drills, cutters, benders, threaders, and welders.

Repairs and maintains plumbing, performing such tasks as replacing washers in leaky faucets, mending burst pipes, and opening clogged drains.

Studies building plans and working drawings to determine materials needed, work aids required, and sequence of installations.

Installs, modifies, and repairs new and existing high temperature water and high-pressure piping systems and equipment, such as steam heating, steam generating, flash and expansion tanks, condensate vacuum and circulating pumps and radiators.

Installs and maintains equipment and plumbing systems in food service areas such as dishwashers, cooking kettles, disposals, drainage systems, and grease traps.

Installs, maintains, and repairs gas lines, stoves, hot water heaters, dryers, and other gas related equipment.

Installs, services and maintains fire extinguishers, hydrants, and sprinkler systems.

Installs, modifies and repairs hydraulic and pneumatic systems for the control and operation of systems, processes, or machinery.

Collects water samples to test for hardness, iron, chlorine, and other conditions.

Performs welding, fabricating, steam fitting, and pipe setting operations.

Determines the layout, pitch, elevation, pressure reduction, expansion, and operation of various piping systems and equipment.

Services and maintains both sanitary and storm sewers.

Fills pipe system with water or air and reads pressure gauges to determine whether system is leaking.

Determines materials needed for most frequently occurring repair work, prepares requisitions, and monitors inventory.

Cleans and maintains tools, and performs routine maintenance on special equipment used in the work.

May assist other skilled trades workers on projects requiring multiple trade specialty areas.

May assist in training lower-level Plumbers and others.

Performs related work as assigned.

Additional Job Duties

Plumber 10 (Crew Leader), Plumber-Licensed 11 (Crew Leader)

Assigns work to lower-level Plumbers, Trades Helpers, prisoners, or residents.

Provides instruction and training in the proper methods and processes necessary to carry out assignments.

Reviews job performance by observing and critiquing work techniques and completed assignments.

Develops plans and estimates for the design, installation, and maintenance of plumbing projects; includes determining time, equipment, and human and material resources needed to complete the work.

Prepares written reports on the condition of ongoing projects and machinery.

Plumber-Licensed E10 - 11

Serves as the licensed plumber on-site at the construction or remodeling project.

Obtains proper permits as required by law to carry out plumbing work on construction and remodeling projects.

Arranges for state inspection and final approval of work projects according to state and national codes.

JOB QUALIFICATIONS

Knowledge, Skills, and Abilities

NOTE: Developing knowledge is required at the intermediate level, considerable knowledge is required at the experienced level, and thorough knowledge is required at the advanced level.

Knowledge of the plumbing codes, building codes, and manufacturing guidelines, which typically apply to the work assignment.

Knowledge of the standard methods, materials, tools, and equipment of the plumbing trade.

Knowledge of water, steam and gas heating units.

Knowledge of sanitation and ventilation principles.

Knowledge of the potential occupational hazards connected with plumbing work and the safety standards and practices, which should be applied.

Knowledge of the practices and methods of welding, steam fitting, and pipefitting.

Skill in the use of the tools of the plumbing trade.

Skill in the installation and repair of plumbing fixtures.

Skill in diagnosing the cause of plumbing problems.

Ability to sketch the arrangement and relationship of plumbing systems.

Ability to interpret and apply blueprints, schematics, maintenance manuals, and assembly instructions to plumbing installations and problems.

Ability to interpret and apply building and plumbing codes to assigned plumbing projects.

Ability to study and comprehend new technology.

Ability to make mathematical computations.

Additional Knowledge, Skills, and Abilities

Plumber 10 (Crew Leader), Plumber-Licensed 11 (Crew Leader)

Ability to select the proper tools and materials and plan a sequence of operations needed to complete a plumbing project.

Ability to design plumbing systems.

Ability to train others and to direct and evaluate the work of other Plumbers.

Working Conditions

Some jobs require regular and recurring exposure to dirt, grease, and raw sewage.

Some jobs are located in a correctional, mental health, or hospital facility, or social services agency.

Physical Requirements

The job requires an employee to work from ladders, scaffolds, hydraulic towers, or in tunnels and crawl spaces.

Education

Education typically acquired through completion of high school.

Experience

Plumber 8

Two years of experience assisting skilled trades people in the plumbing trade.

Plumber E9

Four years of experience in the plumbing trade, including two years equivalent to a Plumber 8.

Plumber 10

Five years of experience in the plumbing trade, including one year equivalent to a Plumber E9.

Plumber-Licensed E10

Four years of experience in the plumbing trade, including two years in the performance of skilled plumbing.

Plumber-Licensed 11

Five years of experience in the plumbing trade, including one year equivalent to a Plumber-Licensed E10.

Alternate Education and Experience

Plumber 8 - Plumber 10, Plumber-Licensed E10 - 11

Completion of a vocational training program in plumbing that includes commercial or industrial level instruction may be substituted for two years of experience assisting skilled trades people.

Special Requirements, Licenses, and Certifications

Some positions within this class series are assigned job duties that may require possession of the Commercial Driver's License (CDL) issued by the Secretary of State as required by Public Act 346 of 1988 to operate a designated state vehicle.

Plumber E9, 10:

Some positions within this class series are assigned job duties that may require possession of a journey plumber's license issued by the State of Michigan.

Plumber-Licensed E10,11:

Possession of a master plumber's license issued by the State of Michigan.

NOTE: Equivalent combinations of education and experience that provide the required knowledge, skills, and abilities will be evaluated on an individual basis.

JOB CODE, POSITION TITLES AND CODES, AND COMPENSATION INFORMATION

Job Code

PLUMBER

Job Code Description

PLUMBER

Position Title

Plumber-E

Plumber-A

Plumber Licensed-E

Position Code

PLUMBERE

PLUMBERA

PLUMLICE

Pay Schedule

A31-009

A31-012

A31-017

Plumber Licensed-A

PLUMLICA

A31-018

JZ

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