

## WESTERN MICHIGAN UNIVERSITY

**TITLE:** Plumber - Licensed

**GRADE:** ST-3

**FUNCTIONS:**

This position provides highly skilled craft labor, working with tools to install, repair, overhaul, replace and perform preventive maintenance for all types of water, sewer, waste and gas distribution systems. The incumbent installs, repairs and maintains copper, galvanized steel, cast iron, vitreous clay, plastic (PVC) piping and PEX; sewers; drains; sinks, showers, bathtubs, lavatories, and related fixtures; control valves; gauges; water softeners; fire protection systems and sprinkler heads; and other hot and chilled water, natural gas, waste and sewer line components. This position locates and marks positions of existing pipes and pipefittings, and passage holes for pipes in walls and floors; cuts openings in walls and floors to accommodate pipes and pipefittings; cuts and threads pipe; and bends pipe to required angles. The incumbent installs valves, pipefittings and pipes; joins pipes and caulks joints. This position fills pipes with water or air and reads pressure gauges to identify possible leakage. This position installs water heaters, water softeners, kitchen and bathroom fixtures; connects water supply; and ensures proper operation.

This position removes damaged or deteriorated piping from existing water, natural gas and sewer or waste distribution systems, and installs and connects replacement piping. The incumbent replaces washers in leaking faucets and opens clogged drains. This position removes obstructions from sewer lines and provides emergency service in response to reported gas leaks.

This position utilizes hammers, chisels, wrenches, pipewrenches, pliers, screwdrivers, sledgehammers, soil pipe cutters, hacksaws, and other tools to remove damaged or deteriorated piping, fittings, fixtures, valves and other components of piping systems and to tighten, connect/reconnect new and replacement piping, fittings and fixtures. The incumbent employs pipe cutters, cutting torches and pipe-threading machines to cut and thread pipes. This position uses hand tools, welding and brazing torches, glass beading kits, caulking guns, yarning irons and plastic adhesives to join pipes and fixtures. The incumbent uses chainfalls to lift and maneuver large sections of pipe into place in overhead installations. This position uses plumb lines, levels and rulers to align pipes and access holes. The incumbent employs hand and power snakes to open clogged drains and sewer lines. This position uses air monitoring devices and gas detectors when working in confined spaces and tracing suspected gas leaks. The incumbent works from ground level to four feet above ground level with or without the use of ladders or scaffolding, and from four feet to fifty feet above floor/ground level with the use of ladders, scaffolds and/or mechanical lift devices. The incumbent works in ditches as deep as 5 feet to repair/replace exterior underground piping.

The incumbent provides information required to update building and systems drawings to accurately reflect current status and, as assigned, may assist in the technical training of an apprentice. This

position determines inventory requirements for supplies, construction materials and replacement parts, and notifies supervisory personnel when (re)ordering is necessary. This position operates a motor vehicle to transport tools, supplies and materials to work sites. The incumbent organizes assigned work so as to minimize materials and manhours required for proper completion of work, and instructs others in the operation of and preventive maintenance for all related tools and equipment.

This position maintains the work area, all tools, all equipment, all supplies and any assigned vehicle(s) in a neat, clean and orderly condition and performs all work in accordance with established safety practices. The incumbent must wear MIOSHA approved safety shoes at all times and must wear a hard hat, gloves and safety glasses when appropriate. When working in vaults, confined spaces and tunnels, the incumbent uses confined space air quality monitoring meters to monitor for the presence of toxic gases. The incumbent must wear a respirator when working in confined spaces and/or in areas of suspected gas leaks. A face shield, leather vest and MIOSHA approved leather gloves are required when using welding equipment. Other protective gear must be worn as required by MIOSHA rules. The incumbent must wear no loose-fitting clothing which might become entangled in equipment or machinery, posing a hazard to incumbent's safety. This position performs additional duties as requested by supervisory personnel.

### **QUALIFICATIONS:**

The incumbent must be able to read and comprehend written instructions and safety regulations regarding the performance of job duties, and must have sufficient writing and mathematical skills to prepare estimates and supply requisitions. Must have the ability to familiarize themselves with electronic communication devices for work orders and other communication. The incumbent must be able to interpret complex blueprints, diagrams, written specifications and operating instructions. Completion of a registered apprenticeship program, or an established, certified training program recognized by the University is required. The incumbent must possess a State of Michigan Plumbing license. Possession of a valid Michigan driver's license is required for operation of any assigned vehicle used to transport tools, supplies, materials, and equipment between work sites.

In order to perform the essential functions of the job, the incumbent must be able to transport plumbing fixtures weighing up to 80 lbs distances of 200 yds with or without mechanical assistance, and fixtures weighing more than 80 lbs/distances exceeding 200 yds with the assistance of another tradesperson. The incumbent must be able to exert 100 foot-pounds of torque to a pipewrench or adjustable wrench to remove fittings and bolts from pipes. The incumbent must be able to ascend a six-foot (6') step ladder at least 20 times per day to repair, install and/or maintain pipes concealed in ceilings and walls. The incumbent must be able to enter and maneuver in restricted spaces in order to access fixtures and piping. The incumbent must be able to work at heights ranging from six feet to fifty feet (6' to 50') for two hours at a time for the entire length of shift. The incumbent must be able to enter and exit ditches at depths of 14 feet or less ten (10) times per day when repairing underground waste and sewer lines and exterior underground steam, water and gas distribution lines.

The incumbent must be able to transport, manipulate and maneuver tools, pipes and fixtures. The incumbent must be able to work for two hours at a time at shoulder level or any intermediate level up to and including directly overhead. The incumbent must be able to tighten/loosen and make fine adjustments in valves, controls and gauges. The incumbent must be able to use pipewrenches, brazing and welding torches, screwdrivers, pliers, wire cutters, wrenches, and other tools of the trade to install, remove, dismantle, adjust, reassemble and re-install piping, fixtures and other components. The incumbent must be able to work in at ground/floor level and/or in restricted spaces up to two hours at a time for the entire length of shift in order to access pipes, joints and fixtures.

In order to obtain a valid Michigan driver's license, the incumbent must possess 20/40 vision with or without corrective lenses. The incumbent must possess 20/20 vision with or without corrective lenses and be able to properly place and align pipes, access holes and other components. The incumbent must be able to accurately read temperature, pressure and fluid level gauges, and air monitoring and gas detection equipment/gauges.

The incumbent must be able to tolerate exposure to extreme temperatures ranging from -25<sup>0</sup> F to 130<sup>0</sup> F, depending on seasonal weather conditions and location of interior/exterior work assignments. The incumbent must be able to tolerate noise levels up to 95 decibels when working in mechanical rooms and other areas and must be able to tolerate exposure to dirt, dust, pollen and other airborne debris. The incumbent must be able to work in proximity with 440 volt power sources, heated pipes carrying hot water and live steam, high humidity, and to waste products carried in sewer pipes. The incumbent must be able to work in confined spaces up to two (2) hours at a time for the entire length of shift when repairing/replacing/overhauling building fixtures and piping. The incumbent must be able to tolerate exposure to dampness, freon and other gasses, biocides, fungicides, corrosives and other water treatment chemicals. Additionally, the incumbent must be able to tolerate exposure to microwaves, fans, blowers, motors, and other mechanical equipment in building mechanical rooms, tunnels, and other locations, and to live steam in mechanical rooms.

A physical examination administered by the employer's designated physician is required to determine the incumbent's ability to perform the essential functions of the job and/or identify the need for a reasonable job accommodation.