

Nothing in this job description restricts management's right to assign or reassign duties and responsibilities to this job at any time.

DUTIES Serves as full performance (journey) level Plumber-Pipefitter in the Utilities Division (Division) of the Engineering and Maintenance Department (Department) at Ronald Reagan Washington National Airport (DCA), Metropolitan Washington Airports Authority (Airports Authority). Installs, maintains, troubleshoots, and repairs building plumbing and building/distribution piping systems including fire protection, domestic water, high temperature hot water, chilled water, steam, natural gas, sanitary and storm sewage systems, pipe lines from 3/4 to 30 inches, fire protection sprinklers, fire hydrants, valves, pumps, pressure regulators, joints and fixtures, and related equipment. Works alone, on a team, and may direct work of sub-journey level employee(s). Performs related functions.

Installs, maintains, troubleshoots and repairs the following systems:

Building plumbing system includes all pipes, equipment, fittings and fixtures within the building structures. Distribution piping system includes all pipes, equipment, fittings, fixtures, lift stations, etc., connecting the buildings into the piping distribution network up to the point of connection to the utility company services such as water, gas, and sewage.

Fire protection system includes fire hydrants, fire pumps, reservoirs, wet, dry, preaction, and deluge systems, tamper switches and other alarming devices, line and PIV valves, sprinkler lines, stand pipe systems, air compressors, surge tanks and distribution system with lines from 3/4 to 20 inches.

Domestic water system includes water lines, valves, hydrants, water meters, back-flow preventers, chlorine station, pumps, pressure regulators, piping, and related equipment.

Hot water and chilled water distribution serves the airport's heating and cooling systems, and includes distribution piping in tunnels and inside buildings, valves, and conversion equipment (hot water to steam) up to, but excluding, the HVAC equipment. Steam distribution includes piping, manholes, valves, traps, and accessories.

Domestic and industrial waste system and **storm drainage system** include various types of valves, pumps, wet wells, sand traps, grease traps, manholes, air compressors, pressure switches, distribution systems, and related equipment.

Natural Gas System includes all piping, equipment, controls, accessories, and fittings from the gas company meters down to the end-use device (e.g., heaters, furnaces, etc.), and all items up to the point of connection to tenant areas (typically a sub-meter).

Helps collect water samples (for chlorine, lead, and bacteria) in compliance with Environmental Protection Agency (EPA) and state regulations. Re-chlorinates domestic water supply, as needed. Checks fire pump capabilities to ensure they meet insurance underwriter's standards. Inspects back-flow preventers to ensure that devices are functioning as designed to prevent

contaminating potable water. Monitors tenants' facilities and writes discrepancy reports when violations are detected.

Troubleshoots to locate sources of problems such as leaks or pump malfunctions resulting in inadequate pressure. Uses schematics as required in troubleshooting equipment. Disassembles 10 to 200 horsepower pumps and replaces worn or broken parts such as impellers, seals, or bearings. Repacks or replaces valves. Checks pipe, joint, and valve sizes, and checks types of pumps to support system pressures to move water and waste material (e.g., recommends increase in pump size to solve problem). Cuts and threads pipes, and aligns with valves, fittings, and joints for accurate match. May design and fabricate parts for older equipment. Installs and repairs plumbing, working with drain-waste-vent piping (e.g., plastic, copper, or cast iron), hard and soft copper water installations, and all types of plumbing fixture installations for bathrooms, kitchens, and lunchrooms.

Uses blueprints and drawings in modifying systems (e.g., to install new lines on sprinkler systems, add new equipment such as pumps and back-flow preventers, etc.). Turns on water to test installations. Marks utility lines to direct contractors' excavations around pipelines. Determines how to shut off main water supply for least impact on airport operations.

Performs preventive maintenance such as lubricating and testing, adjusting pulleys, or tightening tension belts. Removes stagnant water from lift stations and pump houses using pumps and vacuums to remove solid waste and sludge. Flushes hydrants and reservoirs, and exercises valves to remove debris and raise chlorine residuals.

Regularly uses all of the hand and power tools and equipment of the plumbing-pipefitting trade including wrenches, drills, saws, levels, measuring tapes, grinders, torch sets, shovels, picks, leak detectors, pipe cutters and threaders, hand tachometers, hydraulic valve turners, flow and pressure gauges, and water sampling devices. Occasionally uses groove machines, jackhammers and cut saws.

Paints pump rooms, as assigned.

Helps lead the work of lower grade worker(s), as assigned; provides the assistance or instruction deemed necessary.

Drives pick-up truck and a high-pressure vacuum/water jet sewage truck, airside and landside, to various worksites for assignments.

Communicates and interacts effectively with internal and external business contacts including, but not limited to, other members of the unit/team, other Airports Authority employees (such as managers, supervisors, professionals, and support staff), vendors/suppliers/contractors/tenants, and the general public.

Uses a computer and (a) modern office suite software (such as MS Office) to communicate (email), plan, schedule, word process (light word processing only), and conduct research (Internet use to research parts); (b) enterprise software for requisitioning, time and attendance

reporting, and other functions; and (c) special systems/software used in the Department, such as the Computerized Maintenance Management System (CMMS).

Performs other duties as assigned.

Critical features of this job are described under the headings below. They may be subject to change through reasonable accommodation or otherwise.

MINIMUM QUALIFICATIONS (MQs)

To be rated qualified for this job, an applicant must meet all of the MQs listed below at the time of vacancy announcement closure.

1. A high school diploma, a Certificate of General Educational Development (GED), or an equivalent combination of education, experience, and training.
2. Four years of progressively responsible experience (post high school) in the maintenance and repair of plumbing and piping equipment and systems to include one year specializing in installation, test, diagnosis, maintenance, and repair of a range of plumbing and piping equipment and systems such as, but not limited to, fire protection, domestic water, high temperature hot water, chilled water, steam, natural gas, sanitary and storm sewage systems, pipelines from 3/4 to 30 inches, fire protection sprinklers, fire hydrants, valves, pumps, pressure regulators, joints and fixtures, and related equipment. This includes knowledge of the theories, principles, requirements, and standards of the plumber-pipefitter trade.

A Journey License as a Plumber, Pipefitter or Natural Gas Fitter is evidence of four years of progressively responsible plumbing-pipefitting trade experience but is not, by itself, evidence of the one year of experience specializing in the installation, testing, diagnosis, maintenance, and repair of a range of plumbing-piping equipment and utility systems as specified in MQ 2.

3. A Class B Commercial Driver's License (CDL) or ability to obtain a Class B CDL within 90 days of hire, or placement into the job.
4. Certification as Backflow Prevention Assembly Tester (BPAT) within one year of hire, promotion, or placement in the job.

PREFERRED QUALIFICATIONS

The qualifications listed below (if any) are preferred and may be considered in the selection process, but they are not required to be rated qualified for this job.

1. A Journey or Master Plumber, Pipefitter, or Natural Gas Fitter license.
2. Substantive experience in testing, maintaining, and repairing sanitary or storm systems, fire suppression systems, fire hydrants, high temperature water systems, valves, pumps, and pressure regulators.

3. Possession of a valid Class B CDL.
4. Possession of a BPAT Certification.

KNOWLEDGE, SKILLS, ABILITIES AND OTHER FACTORS (KSAOS)

The following KSAOs are required for successful performance of this job and are a basis for rating and ranking applicants who are found to meet the MQs. *Local, Federal, airport industry, or Airports Authority specific bodies of knowledge listed below may be acquired on the job, typically; ability to rapidly acquire them is required at the time of vacancy announcement closure.*

1. Full performance (journey) level knowledge of plumbing-pipefitting to independently inspect, maintain, repair, install, and modify fire suppression, domestic water, natural gas, storm water, sanitary sewage and distribution systems. This includes, but is not limited to, knowledge of valves, pressure regulators, meters, expansion joints, pumps, and related devices in controlling pressure, flow, circulation, and expansion in utility systems.
2. Knowledge of Federal and state regulations and codes pertaining to plumbing, natural gas, fire suppression, domestic water, building codes, and accepted trade practices.
3. Skill in using all of the hand and power tools and equipment of the trade (e.g., sewer snakes, high-pressure jet sewer cleaning vehicle, pipe locators and leak detectors, hydraulic valve turner, fusion machine, saws, drills, grinders, pipe threaders and cutters, torches, soldering and brazing equipment and pipe wrenches) to install, maintain, troubleshoot, and repair plumbing and piping systems and equipment.
4. Skill in problem solving to select, organize and logically process relevant information (verbal, numerical, and mechanical) to solve a problem. This includes skill in interpreting blueprints and schematics to troubleshoot and correct problems such as isolating water line breaks, and using technical manuals to assemble and adjust equipment according to specifications.
5. Knowledge of, and ability to apply, Federal, state and Airports Authority safety rules and procedures to work safely.
6. Skill in written communication to understand written information (including instructions, descriptions and ideas). An example includes reading work orders, parts catalogs, and drawing schematics with notes to understand and resolve utility problems.
7. Skill in oral communication to understand verbal information (including instructions, descriptions and ideas) and to express such information verbally so that others will understand. An example includes exchanging information with Supervisor and business contacts about trouble calls, corrective actions to be taken, and parts needed.

8. Skill in using a computer and (a) modern office suite software (such as MS Office) to communicate (email), plan, schedule, word process (light word processing only), and conduct research (Internet use to research parts); (b) enterprise software for requisitioning, time and attendance reporting, and other functions; and (c) special systems/software used in the Department, such as the Computerized Maintenance Management System (CMMS).
9. Interpersonal skills to interact with contacts in a businesslike, customer service-oriented manner.

RESPONSIBILITY Is responsible, at the full performance (journey) level, for installing, maintaining, troubleshooting and repairing plumbing and piping systems and equipment.

Reports to the Utilities Distribution Section Supervisor (Supervisor) but may also receive direction from a Plumber-Pipefitter Leader. Supervisor assigns work; incumbent independently performs work on own or in a team and solves journey-level problems in accordance with established priorities, policies, procedures, preventive maintenance guides, manufacturer's specifications, codes and other requirements and standards. Keeps Leader or Supervisor informed of progress and problems or conflicts requiring assistance. Work is subject to review in progress, upon completion, and in other ways (such as performance of plumbing systems after repairs, nature and number of call-backs, and comments by customers) in terms of quantity, quality, timeliness, customer service, teamwork, adherence to requirements, and other factors, including attainment of specified performance goals and objective.

EFFORT Work requires moderate to heavy physical effort, such as frequent periods of pushing/pulling or otherwise moving into position items weighing up to 50 pounds (e.g., pumps, blowers and back-flow preventers). Frequently walks or drives to various parts of the Airport and other buildings to perform work. Often works in hard-to-reach and hard-to-see situations that typically require standing, walking, stooping, kneeling, crouching, reaching, climbing or other positioning of self to access and work on pumps and piping. Works in cramped positions and tight spaces for prolonged periods; may descend (using via vertical ladder) into confined spaces such as manholes and tunnels. Uses a variety of hand and bench tools (e.g., wrenches, drills, saws, levels, measuring tapes, grinders, torch sets). Makes diagnosis and determines effectiveness of repair using displays and read-outs of dials, gauges and monitors (e.g., flow and pressure gauges). Distinguishes color-coded objects (e.g., underground utility lines and water sampling materials). Conveys work information by telephone and two-way radio. Responds to various system alarms and radio calls. Operates vehicle using judgment in consideration of weather, traffic and other factors.

WORKING CONDITIONS Works inside and outside in all kinds of weather (rain, snow, ice). Is regularly subject to extreme heat (e.g., 115 degrees F in manholes) with potential for dehydration; hazardous substances and gases; unpleasant odors and fumes; raw sewage, dirt and mud; possible burns from hot water and chemicals; potential falls from ladders; and possible cave-ins of ditches. Frequently works in manholes, lift stations, wet wells and other confined areas for extended periods. Is sometimes exposed to noise of jet aircraft and may potentially be exposed to hazardous materials such as friable asbestos. Exercises care, follows safety precautions and procedures; wears personal protective equipment; and uses respirator,

gas/oxygen detector, and other safety devices, as required. Is subject to time pressures of restoring operations of plumbing systems essential to airport functions, safety or security.

OTHER SIGNIFICANT JOB ASPECTS Is subject to holdover or recall on a 24-hour basis for essential services and emergencies such as restoration of water, gas and sewer lines and other utility services, and snow removal. Is primarily assigned to work 12-hour shifts on Saturday and Sunday and 8-hour shifts on Thursday and Friday.