

***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 journey (full performance) level Plumber-Pipefitter in the Utilities Division (Division) of the Engineering and Maintenance Department (Department) at Washington Dulles International Airport (IAD), Metropolitan Washington Airports Authority (Airports Authority). Inspects, maintains, repairs, installs and modifies building plumbing and building/distribution piping systems, including fire suppression, domestic water, natural gas, storm water, and sanitary sewage systems; repairs plumbing fixtures, centrifugal and circulating pumps, sprinkler systems, fire hydrants, expansion joints, and pipelines from 1/4 to 72 inches. Works alone or on a team, as directed. Performs related functions.

Installs pipes and related equipment, making calculations to determine layout for proper angle, pipe level and placement/elevation of equipment such as pumps, valves, utility meters, backflow preventers, etc. Prepares or modifies sketches of proposed installation of piping system. Regularly measures, cuts and threads, solders, and brazes pipe in building pipe sections; assembles pipe sections with joints and fittings in various systems and applications; insulates and covers pipes; and identifies utility lines for direct excavation around pipelines.

Troubleshoots malfunctions such as inadequate water pressure and leaks using blueprints to identify underground and building pipelines. Makes emergency repairs on various utility service lines, e.g., water main breaks, gas line leakage or ruptured and stopped up sewage lines. Disassembles centrifugal or circulating pumps to replace parts such as impellers. May design and fabricate parts for older equipment, working with drain-waste-vent (DWV) 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. Makes necessary repairs to pumps, hoses and nozzles on fuel trucks; and repairs fire hydrants as required.

Performs preventive maintenance to sanitary and storm lift stations. Uses high-pressure vacuum/water jet sewage truck to clean lift stations; adds degreaser to sanitary sewage lift stations to aid in solid waste disintegration. Cleans debris from storm, floor and roof drains and exhaust pit grates. Uses electric snake to perform preventive maintenance on sewer service lines and a high-pressure vacuum/water jet sewage truck on sewer mains.

Maintains domestic water system by flushing fire hydrants, operating sectional and service valves, locating lines, and performing leak detection surveys. Performs maintenance on plumbing fixtures, such as repairing flush valves and faucets (automatic and manual). Maintains regulators and meters, repairing or replacing as necessary. Inspects, tests, and repairs back-flow preventers to ensure that devices are functioning as designed to prevent contaminating potable water. Tests sprinkler systems. Inspects and repairs fire suppression systems. Performs fire suppression and fire pump testing in accordance with National Fire Protection Association (NFPA) Code 25.

Performs maintenance on natural gas system by lubricating and operating sectional and service valves, locating steel and plastic lines, and performing leak detection. Maintains, repairs, and tests system in accordance with the IAD Operation and Maintenance (O & M) Manual and the

US Department of Transportation (DOT) regulation 49 CFR, Part 192; follows mandated Emergency Plan and Operator Qualification Plan.

Regularly uses all of the hand and power tools and equipment of the plumbing-pipefitting trade including sewer snakes, high-pressure vacuum/water jet sewage truck, 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. Maintains clean work area, takes proper care of tools and equipment.

Takes monthly meter readings for natural gas and domestic water systems; inputs information into hand-held electronic trackers. Exports data to the property and revenue management system, PROPworks.

Performs utility line verification using blueprints or airport utilities systems and locator equipment.

Reports the need for repairs to be made by other shops to the work order desk. Completes work orders when work is complete and updates preventive maintenance records.

Helps collect water samples (for chlorine) in compliance with Environmental Protection Agency (EPA) and state regulations.

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).

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

\*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 the installation, testing, diagnosis, maintenance, and repair of a range of plumbing and piping equipment and systems such as, but not limited to, fire protection, domestic water, natural gas, sanitary and storm sewage systems, and fuel distribution systems; pipelines from 1/4 to 72 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 MQ2.

3. A Class B commercial driver's license (CDL) or ability to obtain a Class B CDL within 90 days of hire, promotion, or placement into the job.
4. Certification as DOT Pipeline Operator Qualified (OQ) within one year of hire, promotion, or placement in the job.
5. 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 domestic water systems, natural gas distribution systems, fire suppression systems, and sanitary or storm systems.
3. Possession of a valid Class B CDL.
4. Possession of an OQ Certification.
5. 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.
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 journey (full performance) level, for inspecting, maintaining, repairing, installing, and modifying building plumbing and piping systems and equipment.

Reports to the Plumber-Pipefitter Supervisor (Supervisor). Supervisor assigns work; incumbent 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 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. Primary responsibility is to work on a rotating shift basis.