EMPLOYEE: CLAIM #



# Job Analysis Form ALTERNATE FORMAT AVAILABLE

JOB TITLE Airport Plumber

JOB CLASSIFICATION Plumber I

**DICTIONARY OF OCCUPATIONAL TITLES (DOT) NUMBER** 862.381-030

**DOT TITLE** Plumber

**DEPARTMENT** Transportation

**DIVISION** Airport

# OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE 2

**CONTACT'S NAME & TITLE** Raleigh Salazar, Building and Trades Manager

**CONTACT'S PHONE** 206-296-7390

## ADDRESS OF WORKSITE

AIR-TR-0200 6518 Ellis Avenue South, PO Box 80245 Seattle, WA 98108

**VRC NAME** Kyle Pletz

**DATE COMPLETED** 4/23/09

# **WORK HOURS**

This is a 40 hour per week position and the hours of the work can be day shift, swing shift or night shift, Monday through Thursday or Tuesday through Friday, 10 hours per day; or 5 8 hour shifts, Monday through Friday. Additional shifts may be assigned based on business need. This JA is based upon a 10 hour shift.

**OVERTIME** (Note: Overtime requirements may change at the employer's discretion) Required on an occasional basis. Overtime is based on business demand such as emergencies. The employee may have to participate in airport operations in the event of inclement weather and airport emergency response.

## JOB DESCRIPTION

Maintaining, repairing, modifying and constructing plumbing, mechanical and structural systems in King County facilities.

# **ESSENTIAL ABILITIES FOR ALL KING COUNTY JOB CLASSIFICATIONS**

- 1. Ability to demonstrate predictable, reliable, and timely attendance.
- 2. Ability to follow written and verbal directions and to complete assigned tasks on schedule.
- 3. Ability to read, write & communicate in English and understand basic math.
- 4. Ability to learn from directions, observations, and mistakes, and apply procedures using good judgment.
- 5. Ability to work independently or part of a team; ability to interact appropriately with others.

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6. Ability to work with supervision, receiving instructions/feedback, coaching/counseling and/or action/discipline.

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## JOB SPECIFIC REQUIREMENTS

- Washington State Driver's License
- Washington State plumber's license
- Certified welder card (some positions)
- Backflow testing license (some positions)
- Journey-level pipefitter card (some positions)

- Washington State Fire Protection Sprinkler Fitter Journey level license
- City of Seattle gas pipefitter license

# **ESSENTIAL FUNCTIONS**

- 1. Plan and develop a preventive maintenance program; perform preventive maintenance on plumbing and mechanical systems and system components.
- 2. Repair and replace plumbing and mechanical systems and system components.
- 3. Maintain, repair and modify fire-protection safety equipment and fire sprinkler systems, irrigation systems and water main-branch line piping systems and valves.
- 4. Repair and maintain facility's structure; perform minor repairs to building's plumbing, And fire control systems.
- 5. Design, size, lay out and install waste, vent and domestic water distribution systems.
- 6. Mount/install plumbing fixtures, trim and related hardware/accessories.
- 7. Maintain plumbing fixtures from source to local sewer systems.
- 8. Estimate and evaluate plumbing projects.
- 9. Perform preventive maintenance on a variety of plumbing systems.
- 10. Weld or fabricate plates, brackets and pipe.
- 11. Test backflow devices.
- 12. Test for competency the heating, ventilation and air conditioning (HVAC) and fire sprinkler systems.
- 13. Install, remove, relocate, align and anchor various types of plumbing and mechanical equipment.
- 14. Coordinate and monitor outside contractors, local and state agencies and insurance companies on work performed on related systems.
- 15. Establish procedures and implement training programs.
- 16. Calculate labor, and material and equipment charges, permit fees and subcontractor costs for various projects.
- 17. Establish and maintain repair and maintenance records.
- 18. Respond to trouble calls, customer complaints, equipment failures and work requests.
- 19. Prepare as-builts following completion of job.
- 20. Plan, design, construct and coordinate smaller construction projects.
- 21. Thoroughly understand operational instructions defined by ATCT personnel via radio and light signals while working within active aircraft movement areas.

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#### PERSONAL PROTECTIVE EQUIPMENT USED

Soft and leather gloves, eye protection, hearing protection, reinforced boots, knee pads, hard hat, welders helmet, face shield and reflective vests.

#### OTHER TOOLS & EQUIPMENT USED

Pen, paper, computer, telephone, high lift, scissors lift, pipes, brazing welder, wire weed welder, stick welder, grinder, solder, wrenches, torch, chop saw, port-a-power, pipe threading machines, ladders, putty, grinders, air compressor, utility knives and razor blades, putty knife, 2-way radio, small hoist, drop cloths, screw gun, screwdriver, and various hand and power tools. The Plumber also uses Caustic for cleaning pipes, various pipe cleaners and pipe sealant.

#### PHYSICAL DEMANDS AS JOB IS TYPICALLY PERFORMED

Continuously = occurs 66-100% of the time
Frequently = occurs 33-66% of the time
Occasionally = occurs 1-33% of the time
Rarely = may occur less than 1% of the time
Never = does not ever occur (such demands are not listed)

Highly Repetitive = Repeating the same motion every few seconds with little or no variation for more than two hours total per day.

# This job is classified as

Heavy—exerting 50-100 pounds of force occasionally, and/or 25-50 pounds of force frequently, and/or 10-20 pounds of force constantly to move objects.

#### Standing

Health Care Provider initials if restricted

Frequently to continuously on all conceivable surfaces for up to 2 hours at a time for up to 6-8 hours total in a work shift. Most commonly occurs while performing fire inspections and backflow testing as well as installing and repairing plumbing systems. Standing varies according to duties performed.

#### Walking

Health Care Provider initials if restricted

Frequently on flat cement and asphalt surfaces for distances of up to 45 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs while inspecting projects and buildings.

# **Sitting**

Health Care Provider initials if restricted

Occasionally on a car seat, office chair, stool or floor for up to 30 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs while driving a truck, working in a vault, repairing plumbing structures in low locations, recording time and labor hours, performing computer work/paperwork (minimal), as was well as attending classes and meetings.

# **Climbing stairs**

Health Care Provider initials if restricted\_

Occasionally for up to 3 minutes at a time while climbing 3 flights for up to 10 minutes total in a work shift. Most commonly occurs while carrying equipment to upper floors for various interior projects.

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Health Care Provider initials if restricted\_

Occasionally to frequently on a ladder to heights of up to 10-20 feet for up to 5 minutes at a time for up to 2-3 hours total in a work shift. Most commonly occurs while installing, troubleshooting and repairing plumbing systems such as overhead fire suppression systems. The employee also climbs in order to braze overhead pipes.

# **Balancing**

Health Care Provider initials if restricted

Occasionally to frequently on a ladder to heights of up to 10-20 feet for up to 5 minutes at a time for up to 2-3 hours total in a work shift. Most commonly occurs while installing, troubleshooting and repairing plumbing systems such as overhead fire suppression systems. The employee also climbs in order to braze overhead pipes.

# Bending neck up

Health Care Provider initials if restricted\_

Frequently for up to 15 minutes at a time for up to 6 hours total in a shift while installing, troubleshooting and repairing plumbing systems such as overhead fire suppression systems.

# Bending neck down

Health Care Provider initials if restricted

Frequently for up to 15 minutes at a time for up to 6 hours total in a shift while installing, troubleshooting and repairing plumbing systems.

# **Bending/Stooping**

Health Care Provider initials if restricted

Frequently on flat cement surfaces repetitively for 30 minutes at a time for up to 6 hours total in a work shift. Most commonly occurs while installing, troubleshooting and repairing plumbing systems in lower areas such as vaults. On most occasions the employee can alternate bending/stooping with kneeling and squatting.

#### Kneeling

Health Care Provider initials if restricted

Frequently on flat cement surfaces repetitively for 30 minutes at a time for up to 6 hours total in a work shift. Most commonly occurs while installing, troubleshooting and repairing plumbing systems in lower areas such as vaults. On most occasions the employee can alternate kneeling with bending/stooping or squatting in accordance with preference.

# **Squatting**

Health Care Provider initials if restricted

Frequently on flat cement surfaces repetitively for 30 minutes at a time for up to 6 hours total in a work shift. Most commonly occurs while installing, troubleshooting and repairing plumbing systems in lower areas such as vaults. On most occasions the employee can alternate squatting with bending/stooping or kneeling in accordance with preference.

# Crawling

Health Care Provider initials if restricted

Occasionally on concrete and dirt surfaces for up to 1-3 minutes at a time for up to 10 minutes total in a work shift. Most commonly occurs while accessing lower, hard to reach areas such as crawlspaces.

# **Operating Controls with Feet**

Health Care Provider initials if restricted

Occasionally for up to 10 minutes at a time for up to 2 hours total in a shift while operating a van or truck as well as when operating a power snake.

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# Reaching above shoulder height

Health Care Provider initials if restricted\_

Frequently for up to 15 minutes at a time for up to 6 hours total in a shift while installing, troubleshooting and repairing plumbing systems such as overhead fire suppression systems.

# Reaching at waist to shoulder height

Health Care Provider initials if restricted

Frequently for up to 30 minutes at a time for up to 4-6 hours total in a work shift while driving a van or truck as well as threading and cutting pipe. The employee also reaches at waist to shoulder height while installing, troubleshooting and repairing plumbing systems such as valves, control systems etc.

# Reaching at knee to waist height

Health Care Provider initials if restricted

Frequently on flat cement surfaces repetitively for 30 minutes at a time for up to 6 hours total in a work shift. Most commonly occurs while installing, troubleshooting and repairing plumbing systems in lower areas such as vaults.

# Reaching at floor to knee height

Health Care Provider initials if restricted\_

Frequently on flat cement surfaces repetitively for 30 minutes at a time for up to 6 hours total in a work shift. Most commonly occurs while installing, troubleshooting and repairing plumbing systems in lower areas such as vaults. On most occasions the employee can alternate kneeling with bending/stooping or squatting in accordance with preference.

# Lifting 1-10 pounds

Health Care Provider initials if restricted

Frequently for up to 30 minutes at a time for up to 6 hours total in a work shift. Most commonly occurs with weights of 5-10 pounds while holding hand tools, valves, pipe, power tools and plumbing materials such as tape, putty or sealant.

#### Carrying 1-10 pounds

Health Care Provider initials if restricted\_

Frequently for up to 10 minutes at a time for up to 6 hours total in a work shift. Most commonly occurs with weights of 5-10 pounds while carrying hand tools, valves, pipe, power tools and plumbing materials such as tape, putty or sealant.

## Lifting 11-20 pounds

Health Care Provider initials if restricted\_

Frequently for up to 15 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs with weights of 12-20 pounds while manipulating power tools, pieces of pipe, valves, etc.

#### Carrying 11-20 pounds

Health Care Provider initials if restricted\_

Frequently for distances of 25-100 feet for up to 5 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs with weights of 12-20 pounds while transporting power tools, pieces of pipe, valves, etc. to and from the work site.

#### Lifting 21-50 pounds

Health Care Provider initials if restricted\_

Frequently for up to 5 minutes at a time for up to 4 hours total in a work shift. Most commonly occurs with weights of up to 50 pounds while manipulating power tools, pieces of pipe, coupling, water main, valves, etc. The employee works on lines ranging from 16" to 3/4" (diameter) so weights can vary drastically based upon the project.

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# Carrying 21-50 pounds

Health Care Provider initials if restricted\_

Occasionally for distances of 25-100 feet for up to 5 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs with weights of up to 50 pounds while transporting power tools, pieces of pipe, couplings, valves, etc. to and from the work site. The employee works on lines ranging from 16" to 3/4" (diameter) so weights can vary drastically based upon the project.

# **Pushing and Pulling**

Health Care Provider initials if restricted\_

Frequently for up to 5 minutes at a time with a force of up to 5-100 pounds for up to 4 hours total in a work shift while transporting carts, dolly, power snake and various equipment to and from work site. The employee also pushes and pulls hand tools (such as wrenches), lengths of pipe, valves, couplings, etc. When setting hydrants the employee needs to be able to push or pull up to 100 pounds of force

Handling

Health Care Provider initials if restricted

Continuously for up to 1 hour at a time for up to 8 hours total in a work shift while using various hand and power tools as well as when driving, manipulating pipe, etc.

# **Operating Controls with Hands**

Health Care Provider initials if restricted

Frequently for up to 15 minutes at a time for up to 4 hours total in a work shift while driving, operating a power snake, valve exercising and hydrant exercising.

#### Fingering

Health Care Provider initials if restricted

Continuously for up to 2 hours at a time for up to 8 hours total in a work shift while operating a computer via the keyboard and mouse as well as manipulating hand tools, small pipes, small valves, pipe tape, pipe dope. Employee also fingers while writing and performing control panel operation.

Feeling

Health Care Provider initials if restricted

Occasionally for up to 1-2 minutes at a time for up to 2 hours total in a shift while identifying pipe temperature, water temperature, valve locations, leaks, couplings and wet surfaces.

**Talking** 

Health Care Provider initials if restricted\_

Frequently for up to 10 minutes at a time for up to 4 hours total in a work shift while conversing about duties, receiving directions and instructions, and communicating with co-workers in person and via 2-way radio. The employee must be able to communicate with the air traffic control tower using clear and concise aviation English terms. The employee also talks with supervisors, coworkers and vendors.

Hearing

Health Care Provider initials if restricted\_

Continuously for up to 2.5 hours at a time for up to 9 hours total in a work shift while identifying potential hazards such as moving machinery, airplanes, alarms, beacons, and sirens. The employee also utilizes hearing when conversing about duties, receiving directions and instructions, and communicating with co-workers, vendors and supervisors in person and via 2-way radio. The employee must be able to communicate with the air traffic control tower using clear and concise aviation English terms.

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Health Care Provider initials if restricted\_

Continuously for up to 4 hours at a time for up to 10 hours total in a work shift while identifying potential hazards such as moving machinery, airplanes, visual devices of fire systems, leak detection, pipe threading, pipe brazing and soldering, etc. The plumber also uses vision when writing, reading, and performing computer and office work, inspecting projects for work quality, operating an automobile and identifying appropriate signage.

**Working with Heightened Awareness** 

Health Care Provider initials if restricted

Continuously for up to 4 hours at a time for up to 10 hours total in a work shift while identifying potential hazards such as moving machinery, airplanes, alarms, beacons, and sirens. The employee also works in elevated areas, working around moving machinery and working around potentially hazardous and toxic chemicals.

#### **ENVIRONMENTAL FACTORS**

Work is performed at the King County Airport in outside weather conditions, indoors, in an office setting, and multiple types of buildings that may have poor ventilation. Workers are continuously exposed to sewer and drainage smells. Employee is also exposed to jet fumes, gas and diesel engines, slick surfaces, extreme noises, high temperatures, prop wash and jet blast. The employee can be exposed to raw sewage on a occasional basis.

The noise level is Approximately 50-140 decibels. The noise is caused by hand tools and airplanes.	HCP Initials if Restricted
Work environment may include the following exposure(s): Outside weather: Frequently-Continuously Non-weather related temperatures above 75 degrees: Occasionally Wet: Frequently Humidity/dampness: Occasionally Fumes: Continuously Odors: Continuously Dusts: Continuously Mists: Occasionally-Frequently Gases: Frequently Moving mechanical parts: Frequently to Continuously Vibration: Occasionally-Frequently Working in high, exposed places: Occasionally Toxic or caustic chemicals: Frequently	HCP Initials if Restricted
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#### POTENTIAL MODIFICATIONS TO JOB

Tommy-lift to reduce heavy lifting of equipment in and out of the van (available for use). Hand truck is available to reduce carrying.

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## **SIGNATURES**

Signatures on this page are obtained before the document becomes available for use and are not required each time the document is reused. Obtained signatures are kept on file at King County Safety & Claims. The Health Care Provider signature section is separate and appears on the following page.

Kyle Pletz, VRC, Vocational Consultant				
Printed name & title of VRC evaluator				
Signature of VRC evaluator	Date			
Drivate dispose 9 title of contact				
Printed name & title of contact				
Signature of contact	Date			
Printed name & title of employee				
Signature of employee	Date			

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# HEALTH CARE PROVIDER SECTION Check all that apply

	The employee is released to perform the described duties without restrictions on performance or work hours as of				
	• •	nployee is released to perform the described duties on a reduced schedule as of The recommended schedule is:			
	☐ Temporary until	Permanent as of			
	The employee is released to perform the describe	ed job with the following modifications:			
	☐ Temporary until	Permanent as of			
	The employee is not released to perform the desc functions:	cribed duties due to the following job			
	☐ Temporary until	Permanent effective			
	The employee is unable to work in any capacity.  A release to work is:   anticipated by	■ Not expected			
The	limitations are due to the following objective medic	eal findings:			
Delegat	and an time advisored and table to a recommendate of the olith. Care D				
Print	ed or typed name and phone number of Health Care P	rovider			
Sign	ature of Health Care Provider	Date			