



Bock Consulting

Job Analysis

Job Title	Carpenter (AVM)	Worker	
DOT Number	860.381-022	Claim Number	
Employer	Port of Seattle	Employer Phone #	(206) 787-5190
Employer Contact	Terry Tucker	Date of Analysis	11/6/11; 9/8/16

- Job of Injury
 Transferable Skills Job
 New Job
 40 Hours Per Week
 5 Days Per Week¹

Job Description, Essential Functions, Tasks and Skills:



The Port of Seattle is a municipal corporation created on September 5, 1911 by the voters of King County. The Port of Seattle is divided into operating divisions, plus other departments that support the divisions and the broad mission of the Port: 1) Aviation Division, 2) Maritime Division, and 3) Economic Development Division.

The Aviation Division owns and operates Seattle-Tacoma International Airport. Sea-Tac Airport handles more than 40 million passengers a year, and offers state-of-the-art air cargo facilities. The Aviation Division employs a maintenance staff which is responsible for all tasks associated with the maintenance and on-going operations at Sea-Tac Airport.

This job analysis is for an Aviation Maintenance Carpenter position working for the Aviation Maintenance Department at Sea-Tac Airport.

Essential Functions:

Aviation Maintenance Carpenters perform a wide variety of tasks related to building requested items, the upkeep of the physical plants in and around Sea-Tac Airport, and completing small repair and remodel jobs as requested. Carpenters have a large carpentry shop located in the Air Cargo 4 building, and have a smaller shop located in the main terminal of the Sea-Tac Airport.



¹ Carpenters assigned to the graveyard shift generally work four 10-hour shifts. In addition, shifts may increase to 12 hours seven days a week during snow emergencies.



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Tasks assigned to Carpenters may include:

- Obtain, read and review work orders, plans, and requests to understand assigned construction/repair/ maintenance projects.
- Request parts, supplies and or materials needed for projects.
- Prepare and or review site specific safety plan for each project. Review job plan. Ensure work is performed in a safe manner.
- Complete tenant improvements. Frame and install panels of drywall.
- Build custom cabinets. Adjust doors.
- Install and repair counter tops of various materials.
- Apply non skid tape to ramps.
- Repair ceiling systems.
- Repair and/or patch flooring surfaces.
- Maintain, repair, or replace passenger/public seating units.
- Repair, replace, or install signage.
- Repair office furniture.
- Install panels to establish office cubicles.
- Maintain/repair restroom partitions and bathroom accessories (such as toilet paper holders, diaper changing stations, and paper towel dispensers).
- Perform door maintenance, such as changing hinges and handles. May replace the door itself.
- Construct and remove concrete forms.
- Assemble/construct walkways and other supporting structures to protect workers and structures in and around project sites. Demolish items/structures when no longer needed.
- Complete periodic inspections at applicable properties. Identify issues and the cause of the issues. Identify potential maintenance issues.
- Work with outside vendors as needed.
- Enter time by work order on a daily basis into job tracking system (Maximo).
- Enter description of work completed in a work log.
- Send and respond to electronic mails.





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- Meet/connect with Crew Foreman on a daily basis.
- Attend periodic meetings during which training is provided and important safety issues are discussed.
- Assist other crafts as requested.
- Assist with snow removal emergencies as necessary.
- Potentially supervise apprentices or mentor students.
- Complete all required forms and documents.

Necessary skills and abilities may include:

- Ability to read plans, blueprints, or sketches.
- Ability to identify the best methods to correctly complete the assigned task. Possess the skills to complete the assigned tasks, denoting attention to detail and accuracy.
- Ability to utilize critical thinking and judgment in defining, analyzing, and resolving problems.
- Ability to take initiative and be responsible for getting work done with limited supervision in an expedient and timely manner.
- Excellent time management and prioritization skills, with the ability to multi-task.
- Ability to communicate effectively, both verbally and in writing.
- Excellent interpersonal skills (including on two-way radio).
- Work in a professional manner. Often the Carpenters are visible to Port tenants and the traveling public, and the worker's need to represent the Port well while working.
- Ability to accurately measure boards, timbers, plywood, or drywall panels using square or measuring tape, and mark cutting lines on materials.
- Ability to use various hand and power tools to perform assigned tasks.
- Ability to use nails and screws to fasten materials.
- Ability to drive forklift to move materials.
- Ability to perform all of the physical demands of the tasks assigned.
- Ability to follow detailed directions closely.
- Ability to work independently, but also within a team environment.
- Must have the ability to perform assigned duties in various types of weather, and be able to complete work at heights and in various locations.
- Ability to safely operate a motor vehicle.
- Working knowledge of Windows-based computers and related accessories. Working knowledge of time tracking software, keyboarding and data input skills, and knowledge of electronic mail software.





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Machinery, Tools, Equipment, Personal Protective Equipment:

- Various hand and portable power tools, including hammers, drills, circular saws, reciprocating saws, roto-hammers, nail guns, drills, sanders, wrenches, squares and levels, chisels, burke bars, pry bars, hand saws, tape measures, utility knives, glue guns, routers, and force gauges.
- Table saw. Chop saw. Shaper Machine. Chain saw. Drill press. Planer.
- Toolboxes or tool buckets. Wheeled work carts. Work/tool belts.
- Nails, bolts, screws, and other hardware.
- Drawers/containers used to store hardware.
- Extra parts to repair various types of items, such as doors, public/passenger seating units, and bathroom partitions and fixtures.
- Carpet repair kit. Tile repair kit. Roof repair kit.
- Various types of flooring material; tile, carpet, etc.
- Cubicle panels. Wall panels. Desk surfaces.
- Sheets of plywood and drywall.
- Dimensional lumber.
- Portable generators. Air compressors.
- Work trucks. Scissor lifts and boom lifts. Forklifts.
- 2-way radios.
- Slip test machine
- Nylon straps and ropes.
- Ladders.
- Brooms (including hand held) and dust pan.
- Job boxes. Wheeled work carts.
- Log books.
- Computer, computer accessories, and project management software (Maximo).



Workers are required to wear safety vests any time they are outside the shop. Eye and ear protection, hard hats, and respirators are worn as needed. Carpenters may also wear gloves, kneepads, chainsaw chaps, approved safety boots, fall arrest harnesses (when working at heights over 6 feet), and rain gear.



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Education / Training:

Carpenters are members of the Local 30 of the Carpenters' union. Union workers are divided into two categories: 1) Apprentices, and 2) Journeymen. Initial experience would be gained through an apprenticeship program, after which workers become Journeymen Carpenters. Aviation Maintenance generally hires Journeymen level workers.

The Carpenter apprenticeship program is a State approved program that is a cooperative effort of labor (The United Brotherhood of Carpenters), business, and the State of Washington. The program was designed to establish competency-based training, supplemented with on-the-job training, which would provide all of the skills necessary to become a journey level carpenter. The apprenticeship program combines a hands-on and classroom education, along with practical on-the-job experience. The program is designed to be completed in four years, but can be completed in less. The program requires that an apprentice come to school four times a year for one full week to receive formal instruction.

Additional training includes, but is not limited to, AOA training (which allows workers to drive on the airfield), Asbestos Awareness, forklift, power truck, and pallet jack certifications. A valid Washington State Driver's License is required in this position, as is the ability to pass a required FAA background check.

All Port of Seattle employees must have training and or enough hands-on experience with computers to have a working knowledge of Windows-based computers, related accessories, time-tracking software, keyboarding, data entry, and electronic mail software.

Per the Dictionary of Occupational Titles (DOT): 860.381-022 Carpenter

Specific Vocational Preparation (SVP): 7 (From two to four years)



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COGNITIVE AND BEHAVIORAL ELEMENTS/DEMANDS

Frequency Definitions:		
Continuously = Occurs 66-100% of the time.	Occasionally = Occurs 1-33% of the time	
Frequently = Occurs 33-66% of the time.	Rarely = May occur less than 1% of the time.	
Never = Does not ever occur.		
Comprehension		
Articulating and comprehending information in conversations.		Continuously
Reading, comprehending, and using written materials.		Occasionally
Understanding and solving problems involving math and using the results.		Occasionally
Using technology/instruments/tools & information systems.		Continuously
Working with two and three dimensional formats.		Frequently
Remembering		
Remembering spoken instructions.		Continuously
Remembering written instructions.		Frequently
Remembering visual information.		Continuously
Recalling information incidental to task at hand.		Continuously
Memorizing facts or sequences.		Occasionally
Remembering simple instructions.		Continuously
Remembering detailed instructions.		Continuously
Learning & Processing		
Effectively learning and mastering information from classroom training.		Occasionally
Effectively learning and mastering information from on-the-job training.		Continuously
Learning from past directions, observations, and/or mistakes.		Continuously
Using common sense in routine decision making.		Continuously
Recognizing and anticipating potential hazards and taking precautions.		Continuously
Thinking critically and making sound decisions.		Continuously
Integrating ideas and data for complex decisions.		Occasionally
Determining and following precise sequences.		Frequently
Coordinating and compiling data and information.		Occasionally
Analyzing, synthesizing data and information.		Occasionally
Tasking and Planning		
Performing repetitive or short-cycle work.		Occasionally
Working under specific instructions.		Frequently
Completing complex tasks.		Occasionally
Directing, controlling, or planning for others as necessary for basic tasks.		Occasionally
Directing, controlling, or planning for others as necessary for complex tasks.		Rarely
Multi-tasking.		Frequently
Planning, prioritizing, and structuring daily activities.		Continuously



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Use Appropriate Behavior for Professional Work Environment	
Receiving criticism and accepting limits appropriately.	Frequently
Maintaining emotional control and organization under increased stress.	Continuously
Maintaining socially appropriate affect, temperament, and behavior.	Continuously
Monitoring own quality of performance and altering behaviors to correct mistakes or improve outcome.	Continuously
Working independently and/or unsupervised.	Continuously
Adapting to frequent interruptions, changes in priorities, or changes in work location.	Frequently
Responding effectively to emergency situations.	Rarely

Frequency Designations: Required Beneficial Not Necessary	
Maintaining Attendance and An Assigned Work Schedule	
Maintaining predictable and reliable attendance each work shift.	Beneficial
Being punctual.	Beneficial
Taking rest periods at set times or only at times determined by breaks in job responsibilities.	Not Necessary
Adjusting to a flexible schedule of work days and or shifts.	Beneficial



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PHYSICAL DEMANDS

N/A: Not Applicable

S: Seldom (1-10% of the time)

O: Occasional (10-30% of the time)

STRENGTH: Sedentary Light

F: Frequent (30%-70% of the time)

C: Constant (Over 70% of the time)

WNL: Within Normal Limits (talking, hearing, etc.)

Medium Heavy Very Heavy

Frequency

Comments

Sitting	S	While driving to job sites or driving a forklift. Attending meetings.
Standing	F	Interchange with walking. Frequency will depend on assigned tasks, and whether worker is in the shop or in the field.
Walking	F	Interchange with standing. Frequency will depend on assigned tasks, and whether worker is in the shop or in the field. If performing tasks in the terminal buildings, Carpenters walk to work areas pushing a wheeled work cart containing the tools, parts, and items they may need to complete assigned tasks (including a small step ladder). Walking may be over carpet, tile, asphalt, concrete, uneven or slippery surfaces, or pieces of lumber or various construction items.
Lifting (up to 10 pounds)	F	Hand and portable power tools, smaller pieces of material, hardware and partial/smaller boxes of fasteners, smaller tool boxes/bags, and parts and components for repairing items, such as passenger seating or bathroom fixtures. Phone and 2-way radio.
Lifting (10 to 25 pounds)	O	Tool box/bucket, medium sized pieces of material, multiple pieces of material, partial sheets of plywood, partial boxes of fasteners, and ladders.
Lifting (25 to 75 pounds)	S	Cabinets, doors, large pieces of wood, multiple pieces of lumber, cubicle/wall panels, cubical desk surfaces, partial sheets of plywood, whole sheets of plywood (depending on thickness, 4x8 sheets weigh 40-60 lbs.), full boxes of fasteners/nails (weigh 40-60 lbs.), portable air compressors weigh 60 lbs. and portable generators (lifted by 2 workers, est. weight 50 lbs.). Note: While in the main shop, heavy items can be lifted using a forklift.
Carrying (up to 10 pounds)	F	Hand and portable power tools. Smaller pieces of material. Lifting hardware and partial/smaller boxes of fasteners. Smaller tool boxes/buckets. Parts and components for repairing items, such as passenger seating or bathroom fixtures. Phone and 2-way radio. Note: When working in the terminal buildings, workers generally utilize wheeled work carts to move items between work areas.
Carrying (10 to 25 pounds)	O	Tool box/bucket, medium sized pieces of material (or multiple pieces of material), partial sheets of plywood, partial boxes of fasteners, and ladders. Note: When working in the terminal buildings, workers generally utilize wheeled work carts to move items between work areas.



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Carrying (25 to 75 pounds)	S	Cabinets, doors, large pieces of wood, multiple pieces of material, cubicle/wall panels, cubical desk surfaces, partial sheets of plywood, whole sheets of plywood (depending on thickness, 4x8 sheets weigh 40-60 lbs.), full boxes of fasteners/nails (weigh 40-60 lbs.), portable air compressors weigh 60 lbs. and portable generators (lifted by 2 workers, est. weight 50 lbs.). Note: While in the main shop, heavy items can be moved using a forklift. Note: While in the main shop, heavy items can be moved using a forklift. Also, when working in the terminal buildings, workers generally utilize wheeled work carts to move items between work areas.
Pushing/Pulling (Up to 15 pounds of force).	F	Opening and closing drawers, opening doors, hammering, holding wood or other items in place to nail or screw, pushing wood through table saw, pushing wheeled work cart (est. up to 15 lbs. of force), using various tools such as wrenches, screwdrivers, drills, and saws, and pushing/pulling forms into place.
Pushing/Pulling (15 to 50 pounds of force).	S	Holding wood or other items in place to nail or screw, pushing wheeled cart loaded with material (est. up to 50 lbs.), using various tools such as wrenches, screwdrivers, drills, and saws, and pushing/pulling forms into place.
Climbing Stairs/Ladders	O	When entering/exiting the carpenter shop located in the main terminal. Workers may encounter stairs when working in the terminal or field. Carpenters climb ladders as necessary (ladders can range from stepstools to 20'+ extension ladders). Frequency depends on assigned tasks.
Working at Heights/ Balancing	O	Frequency depends on assigned tasks. Workers may be required to use ladders or manlifts to reach work areas. May also walk on elevated scaffolding and walkways.
Bending at Waist	F	Building and installing items, removing items, placing and securing materials and fixtures, driving vehicle or forklift, cleaning up work area, and gathering materials and supplies.
Bending Neck	C	All assigned tasks involve neck movement.
Twisting at Waist	S	While maneuvering in tight areas, gathering materials, or placing materials or fixtures to install, cutting materials, and cleaning up work areas.
Crouching/Kneeling	O	Working below waist level. Note: Workers may wear kneepads while working.
Crawling	S	Working below waist level. Note: Workers may wear kneepads while working.
Stooping	S	While entering and working in, or exiting from, tight work areas.
Reaching (up to Shoulder Height)	F	In general, most assigned tasks involve reaching movements: building and installing items, placing and securing materials, constructing forms, driving, placing cabinets, gathering lumber and supplies, cutting material, and cleaning up work areas.
Reaching (Above Shoulder Height)	O	Gathering items stored above shoulder height, climbing ladders, working on items located above shoulder level.
Driving	S	Driving work trucks and forklifts.
Foot Controls	S	Driving work trucks and forklifts, and using safety switches stationary tools or boom/manlifts.



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Repetitive Motion	S	While using hand tools (e.g., screwdrivers), hammers/nail guns, shop tools (when producing multiple units of a required item).
Handling/Grasping	C	30 % Pinch Grasp 70 % Whole Hand Grasp
Fine Finger Manipulation	F	Using measuring tape, using tools, holding nails and other fasteners, pulling triggers on power tools, installing nonskid tape on ramps, using electronic access systems, entering data in a computer, when using desk or cellular phones and hand held radios.
Keyboarding	S	While entering time and work performed on a daily basis, creating and responding to electronic mail.
Talking	O	Communicating with supervisors, co-workers, and traveling public.
Hearing	C	Communicating with supervisors, co-workers, and traveling public. Listening for radio traffic and hazards.
Seeing	C	Visual abilities would be considered important in this position.
Writing	S	While marking measurements or taking notes.
Normal Job Site Hazards	C	Carrying large and/or heavy objects, working at heights, falling objects, striking head on overhead objects, driving vehicle, other vehicles, moving/mechanical equipment, slippery walkways, saws and other sharp tools, fumes, dust, noise, odors, and vibrations.
Expected Environmental Conditions	C	Work may be performed inside a shop environment, temperature controlled office/commercial space, or outside exposed to the weather. Worker may be exposed to loud environments, wood dust, and fumes. Carpenters may work in tight spaces (although they are not trained for working in confined spaces).

The above job analysis represents the requirements of a specific job based on personal observations, discussions with employer representatives, and/or workers. On occasion, practicality and feasibility prevent the direct observation and/or gathering of objective quantifiable data. For this reason, a "best estimate" may have been used when reporting physical demand frequencies.

Analysis was done on the job site? Yes No

Job Analysis Reviewed By: Terry Tucker, Rick Wright, and Elgin Grant

Completed by Vocational Provider Brice York, B.A., CDMS

Date September 8, 2016 Signature of Vocational Provider 



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FOR PHYSICIAN'S/EVALUATOR'S USE ONLY

- The injured worker can perform the physical activities described in the job analysis and can return to work on _____
- The injured worker can perform the physical activities described in the job analysis on a part-time basis for _____ hours per day. The worker can be expected to progress to regular duties in _____ weeks/months.
- The injured worker can perform the described job, but only with the modifications/ restrictions in the attached report and/or listed below. These modifications/restrictions are (check one):
 - Temporary for _____ weeks _____ months
 - Permanent
- The injured worker cannot perform the physical activities described in the job analysis based on the physical limitations in the attached report and/or listed below. These limitations are (check one):
 - Temporary for _____ weeks _____ months
 - Permanent

COMMENTS:

Date _____ Physician's/Evaluator's Signature _____

Physician's/Evaluator's Name Printed _____

PLEASE RETURN COMPLETED FORM VIA FACSIMILE TO:

Port of Seattle Employee Health & Safety Department at (206) 787-3406