



Bock Consulting

Job Analysis

Job Title	Electronic Technician (“ET”) Group Foreman (AVM)	Worker	
DOT Number	828.161-010, 003.161-014, and 828.261-022	Claim Number	
Employer	Port of Seattle	Employer Phone #	(206) 787-3000
Employer Contact	Teri Grosvenor	Date of Analysis	9/6/11; 9/9/16; 1/23/19

- Job of Injury
 Transferable
 New Job
 8-10 Hours Per Day
 4-5 Days Per Week
 Skills Job

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 Electronic Technician Group Foreman working for the Aviation Maintenance Department.

Essential Functions:

An Electronic Technician Group Foreman is responsible for the day-to-day supervision and organization of the Automated Control Specialists who install, monitor, troubleshoot, maintain, and repair electronic equipment throughout the airport, and other Port owned properties. Electronic Technician Group is tasked with working on a wide variety of systems, including central fire alarm systems, automated access control systems, closed circuit television systems (including the 1,200 cameras throughout Sea-Tac Airport), radio/communications systems, flat panel display/LED signage systems, passenger paging systems, loading bridge (the tunnel-like structures used to move passengers to and from the airplanes) control systems, and baggage control systems. In addition to the supervisory tasks, the Foreman will also





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be asked to perform general system maintenance/repair/installation-related tasks.

Electronic Technician Group Foremen are scheduled 4-5 days a week, 8-10 hours per day around the clock at Sea-Tac Airport. The Foremen supervise the Automated Control Specialists who are scheduled on three shifts (day, swing, and graveyard).

The work performed by a Electronic Technician Group Foreman can be categorized as follows:

Work Category	Estimated Time
Office/desk/administrative work (including meetings)	40-60%
Supervising work and personnel and providing assistance in and around shop	10-20%
Supervising work and personnel and providing assistance in the field	5-10%
Performing trade-specific work	10-20%
Total	100%

Tasks assigned to Electronic Technician Group Foremen may include:

- Receive notifications of new work orders/requests (via telephone, email, or job tracking system). Develop plans for completing requested projects. Plan for material, equipment, PPE, and staffing needs.
- Order parts, supplies, and or materials needed for projects. Work with General Foreman or Purchasing to ensure correct products and items are ordered and available when needed. Periodically work with vendors related to supplies and or materials needed.
- Prepare and or review site specific safety plan for each project/work task. Prepare job plans and supporting documentation as needed.
- Coordinate scheduling with other trades to ensure materials, equipment, and workers from other trades are available as needed to complete assigned work orders/projects. Coordinate with outside vendors/contractors/entities.
- Prepare personnel schedules and assign work tasks.
- Enter time by work order on a daily basis into job tracking system (Maximo). Review daily time entered by crew and approve, as applicable.
- Ensure description of work completed is available and or correct in work log.
- Complete all required forms and documents.
- Send and respond to electronic mails.





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- Visit project sites and oversee/inspect completed work. Ensure work is being performed in a safe manner.
- Meet/connect with crew (as applicable) daily to manage workflow, address issues, and reassign personnel based on work demands.
- Potentially lead periodic meetings to provide training and discuss important safety issues.
- Attend periodic meetings with supervisors and other entities.
- Coordinate work priorities with supervisors.
- Assist Specialists with technical input, answer questions from crew, and provide troubleshooting advice as needed.
- Assist crew in choosing tools, equipment and materials.
- Ensure crew has current certifications and or training as required by law or ordinance.
- Potentially assist with responses to requests for bids.
- Maintain the electronics systems assigned to Automated Control Specialists. This may include completing emergency maintenance (“EM”), corrective maintenance (“CM”), or preventive maintenance (“PM”) projects.
- Inspect electronic devices. Run diagnostic tests on electronic devices to test function/operation. Troubleshoot issues to identify and target issues. Perform repairs or replace components as needed. Install new/updated electronic equipment and systems throughout the airport.
- Repair and/or rebuild reusable equipment.
- Complete periodic inspections at applicable properties. Identify issues and the cause of the issues. Identify potential maintenance issues.
- Assist other crafts as requested.
- Perform other tasks as requested.

Necessary skills and abilities include the:

- Knowledge and skills necessary to install, maintain, and repair electronics systems in an efficient and safe manner. Knowledge of the hazards and safety precautions associated electronic, electrical, and electro-mechanical devices.





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- Knowledge of computer networking basics.
Knowledge of programmable logic controls, including installation, testing, maintenance and repair.
- Ability to identify and troubleshoot an issue quickly, identify the best method(s) to address the issue, and correctly complete the identified task.
- Ability to utilize critical thinking and judgment in defining, analyzing, and resolving problems.
- Skills to complete the assigned task(s), using all of the various types of tools and equipment, in a safe manner. Ability to operate a motor vehicle safely.
- Ability to take initiative and be responsible for getting work done with limited supervision in an expedient and timely manner.
- Ability to read and interpret blue prints, schematics, drawings and detailed electronics systems technical specifications.
- Excellent time management and prioritization skills, with the ability to multi-task.
- Ability to manage people and work performed by others.
- Ability to communicate effectively, both verbally and in writing.
- Excellent interpersonal skills (including on two-way radio).
- Work in a professional manner. Often the Foremen are visible to Port tenants and the traveling public, and the workers need to represent the Port well while working.
- 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 understand and follow oral and written instructions, and maintain attention to detail while working.
- Ability to work independently, but also within a team environment. Electronic Technician Group Foremen need to be able to work with other crafts (such as Electricians), and coordinate work among various types of crafts.
- 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:

- Windows-based desktop and laptop computers. Various computer software, such as Microsoft Office, project management software (Maximo), and software specific to programming, testing and maintaining electronic control and communications equipment. Laptop case.
- General office equipment, such as desks, chairs, fax and copy machines, and telephones.
- General office supplies, such as pens/pencils, notepads, and copy paper.
- Hand tools, including screwdrivers, wrenches, pliers, wire cutters, tape measures, utility knives, and hammers/mallets.
- Power tools, including drills, saws, and drill presses.
- Various testing equipment, from small hand-held meters to larger testing components (some mounted on rolling carts).
- Soldering equipment. Clamps. Vises.
- Air compressor. Portable generator.
- 2-way radios.
- Ladders: step, freestanding, and extension. Man lifts/scissor lifts.
- Hand trucks.
- Tool boxes or tool buckets.
- Electric carts/scooters and other vehicles to move personnel, tools, and equipment to work sites.
- General office equipment, including chair, multi-line phone, copy and fax machines.
- General office supplies, including pens, pencils, folders, paper, stapler, scissors, paper clips, etc



Foremen are required to wear approved safety shoes/boots at all times. When working outside the shop, safety vests are required. When working in a construction zone, workers are required to wear a hardhat and eye protection. Ear protection is also required on the Airport Operations Area (“AOA”) and used other times when necessary. Foremen may also wear gloves, kneepads, and fall arrest harnesses as required.



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Education / Training:

Automated Control Specialists, including the Foremen, are represented by the IBEW – Local 46.

The Foreman would be a Journeyman-level Electronic Technician with a degree from an approved Electronic Technician school, with significant experience in a variety of electronic, electrical, and computer systems in an airport environment. Preferred training includes manufacturers' certifications. When available, Foremen positions are only posted internally, and candidates are chosen from the existing pool of Automated Control Specialists.

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

Foremen must complete the Front Line Supervisor Training as a Port of Seattle requirement. This training is offered once a year and must be completed during the first year as a Foreman. Additional training includes, but is not limited to, AOA training (which allows workers to drive on the airfield), Asbestos Awareness, and forklift certifications.

A valid Washington State Driver's License is required in this position, as is the ability to pass a required FAA background check.

Per the Dictionary of Occupational Titles (DOT):

828.161-010 Supervisor, Electronics Systems Maintenance

Specific Vocational Preparation: 8 (from four to ten years)

003.161-014 Electronics Technician SVP: 7 (From two to four years)

828.261-022 Electronics Mechanic 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.	Frequently
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.	Frequently
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.	Continuously
Determining and following precise sequences.	Frequently
Coordinating and compiling data and information.	Frequently
Analyzing, synthesizing data and information.	Frequently
Tasking and Planning	
Performing repetitive or short-cycle work.	Frequently
Working under specific instructions.	Continuously
Completing complex tasks.	Frequently
Directing, controlling, or planning for others as necessary for basic tasks.	Continuously
Directing, controlling, or planning for others as necessary for complex tasks.	Frequently
Multi-tasking.	Continuously
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.	Continuously
Responding effectively to emergency situations.	Occasionally

Frequency Designations: Required Beneficial Not Necessary	
Maintaining Attendance and An Assigned Work Schedule	
Maintaining predictable and reliable attendance each work shift.	Required
Being punctual.	Required
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	F	While performing administrative duties, driving vehicle, attending meetings, programming equipment, repairing and testing equipment at a workbench/workstation, and sitting on stool in equipment rooms.
Standing	O	Interchange with Walking. Frequency will depend on assigned tasks. While viewing/inspecting/accessing various equipment, and talking with co-workers/supervisors/vendors.
Walking	O	Interchange with Sitting and Standing. In shop area where desks and workbenches/workstations are located. Walking to equipment locations or walking between vehicle and work areas. While inspecting/installing/repairing/replacing equipment. Walking to meetings.
Lifting (up to 10 pounds)	O	Lifting parts, system components (power supply 10 pounds; UPS batteries 5-10 pounds; light modulator 10 pounds), cameras, radios, laptop computer, computer networking equipment, paperwork, drawings/blueprints, tools, up to 2 reams of copy paper, binders, and manuals.
Lifting (10 to 30 pounds)	S	Lifting system components, desktop computers, boxes of equipment and accessories, large blueprints, toolbox, power tools, electronic testing equipment, and smaller flat panel displays.
Lifting (30 to 50 pounds)	Rare	Infrequent. Lifting larger system components, larger electronic testing equipment (up to 35 pounds), larger flat panel displays, LED signage, audio/visual components, and larger UPS batteries (2 person lift - est. 50 pounds).
Carrying (up to 10 pounds)	O	Carrying parts, system components (power supply 10 pounds; UPS batteries 5-10 pounds; light modulator 10 pounds), cameras, radios, laptop computer, computer network equipment, paperwork, drawings/blueprints, tools, up to 2 reams of copy paper, binders, and manuals.
Carrying (10 to 30 pounds)	S	Carrying system components, laptop bag with laptop, desktop computer, boxes of equipment and accessories, large blueprints, toolbox, power tools, electronic testing equipment, and smaller flat panel displays.
Carrying (30 to 50 pounds)	Rare	Infrequent. Carrying larger system components, larger electronic testing equipment (up to 35 pounds), larger flat panel displays, LED signage, audio/visual components, and larger UPS batteries (2 person carry - est. 50 pounds). Note: Wheeled carts are available to limit the amount of carrying that is necessary. In addition, workers try to drive vehicles as close as possible to a work site to limit the amount of carrying.
Pushing/Pulling (Estimated force up to 15 lbs.)	O	While opening doors, opening/closing file drawers, obtaining/replacing binders/files/parts/components from shelves or drawers, maneuvering wheeled carts, removing or replacing system components, using hand tools.



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Pushing/Pulling (Estimated force 15 to 40 lbs.)	Rare	Potentially while removing or replacing system components, or exerting force on a tool.				
Climbing Stairs/Ladders	S	Stairs may be the only way to reach certain work areas (e.g., areas in and around the baggage conveyor systems). Stairs may also be encountered when walking in the terminal. And although elevators are generally available to move between floors, some rooms have no elevator access, and can only be reached by stairs. Step, freestanding, and extension ladders may be used to reach equipment and components of various systems.				
Working at Heights/Balancing	Rare	Workers may use ladders or manlifts to reach work areas.				
Bending at Waist	F	While working at desk, accessing, inspecting, or repairing items at or below waist level, reaching for items at workbench/workstation, gathering tools and supplies, programming and testing equipment while standing, and entering/exiting vehicles.				
Bending Neck	F	While using desktop and laptop computers, reviewing paperwork and other written documentation, obtaining files or binders, or inspecting/repairing/installing equipment.				
Twisting at Waist	S	While obtaining/moving items while seated at desk or workbench/workstation, conducting inspections, accessing equipment to repair/replace, moving in, around and through the conveyor systems, and entering/exiting vehicles. Twisting can generally be minimized if the worker moves their feet while working.				
Crouching/Kneeling	Rare	When working on equipment or components below waist level, viewing/inspecting/accessing items at or below waist level, and gathering parts and supplies stored below waist level.				
Crawling	Rare	May be necessary when working on equipment or items below waist level.				
Stooping	Rare	While inspecting/accessing/removing/replacing parts in hard to access areas, moving in, around and through conveyor systems, and entering/exiting vehicles. NOTE: It may be necessary for a worker to carry tools, parts, or equipment while stooping to reach specific work areas, specifically in and around the baggage conveyor system.				
Reaching (To shoulder level)	F	While obtaining/moving items while seated at desk or workbench/workstation, conducting inspections, installing/repairing/replacing components and equipment, testing and repairing equipment, and gathering parts and supplies stored from floor to shoulder level. Obtaining documents from file cabinets or shelves. Picking up telephone receiver or radio.				
Reaching (Over the shoulder)	S-O	Frequency will depend on assigned tasks. Inspecting/installing/repairing/replacing components and equipment over shoulder level. Gathering parts and supplies stored above shoulder level.				
Repetitive Motion	N/A	The variety of tasks assigned to the Foremen minimizes repetitive motion.				
Handling/Grasping	F	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">60</td> <td style="text-align: center;">% Pinch Grasp</td> <td style="text-align: center;">40</td> <td style="text-align: center;">% Whole Hand Grasp</td> </tr> </table>	60	% Pinch Grasp	40	% Whole Hand Grasp
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Fine Finger Manipulation	F	While sorting paperwork, opening boxes of equipment and accessories, using telephone, using keys, pushing buttons on equipment, connecting cables, using tools and testing equipment, installing/removing/repairing/replacing electronic equipment and components. Operating triggers on power tools and using controls on shop tools. Writing.
Keyboarding	F	While writing reports, creating and responding to electronic mail, researching items on the internet, placing orders for equipment and accessories, using Maximo to enter time, check entered time, or check on work orders, programming radio templates, controllers, computer network, and other electronic equipment, and performing tests.
Writing	S	Taking notes, noting action items, and marking changes on documents.
Driving	S-O	While driving electric cart or other vehicle to and from work sites.
Foot Controls	S-O	While driving.
Talking	F	Communicating with supervisors, co-workers, and potentially the public.
Hearing	C	Communicating with supervisors, co-workers, and potentially the public. Listening for radio traffic and hazards.
Seeing	C	Visual abilities would be considered important in this position.
Normal Job Site Hazards	C	Electrical current, moving machinery and conveyor belts, moving vehicles, pinch hazards, sharp tools, working at heights, cleaning solvents, noise (including airplanes), dust, and fumes.
Expected Environmental Conditions	C	A majority of the work completed by the Foremen is performed inside buildings. This work may be in a shop office, at a shop workbench/workstation, or working throughout one of the Port-owned buildings. Workers may be exposed to external weather conditions when working outside, or walking to a vehicle. Workers may be exposed to temperature changes (generally work areas are not temperature controlled, and may be impacted by outside temperatures), noise, dust, and fumes.

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: Teri Grosvenor, Gary Richer, and Thomas O'Day

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

Date January 23, 2019 Signature of Vocational Provider



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Claimant:
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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