



**Disability Services
Safety and Claims Management**
Department of Executive Services
Human Resources Division
500 4th Avenue, Room 500
Seattle, WA 98104
(206) 477-3350
(206) 296-0514 FAX

Employee :

Claim # :

JOB ANALYSIS

Job Title:	Utility Line Worker		
Department:	Transportation	Division:	Transit
DOT Title:	Line Erector	DOT #:	821.361-018
SVP:	7	Requestor:	
Worksite Address:	2255 4 th Ave S Seattle, WA 98134	Office Contact Name/ Phone/ Email:	Layne Eddy 203-263-1714 layne.eddy@kingcounty.gov
Original Analyst:	Kyle Pletz, BA, BA, VRC, CDMS		Analysis Date: 5/11/22
Update Analyst:			Update Date:

☒ On-Site ☐ Interview ☐ Representative

JOB DUTIES:

Perform journey level work in the construction and maintenance of the trolley overhead and underground systems. Electrical systems (750 volts DC) are energized during construction and maintenance activities. May lead others within the same trade, material workers and helpers, on a temporary basis for specific projects.

ESSENTIAL FUNCTIONS ACCORDING TO THE EMPLOYER:

All King County jobs require ability/essential function to:

- Demonstrate predictable, reliable, and timely attendance.
- Follow written and verbal directions to complete assigned tasks on schedule.
- Read, write, and communicate in English & understand basic math.
- Learn from directions, observations, and mistakes and apply procedures using good judgment.
- Work independently or as part of a team and interact appropriately with others.

Job Specific Requirements:

1. Sets and guys all types of poles; assembles and fastens cross-arms, brackets, mast arms and related hardware.
2. Strings wires and cables for electrical power distribution systems and transit power circuits or control circuits.
3. Installs and maintains overhead trolley lines; tests, troubleshoots and repairs defective circuits.
4. Splices wires and cables and installs conductors in conduit or overhead wiring.
5. Trims trees in close proximity to overhead lines.
6. Installs, maintains, and repairs intersection tracks, directional, power and induction switches, sectional circuit breakers, crossovers, and other overhead trolley equipment.
7. Performs inspection, maintenance and service on the rails and switch gear.
8. Performs related work as assigned by the supervisor.

EXPERIENCE, QUALIFICATIONS, KNOWLEDGE, SKILLS:

Perform journey level work in the construction and maintenance of the trolley overhead and underground systems. Electrical systems (750 volts DC) are energized during construction and maintenance activities. May lead others within the same trade, material workers and helpers, on a temporary basis for specific projects.



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Machines, Tools, Special Equipment, Personal Protective Equipment Used:

Cable, tower truck, hoisting devices, hand tools, wood and steel poles, chain saw, cranes, shovels, digging bars, jackhammer, digger truck, auger, pole puller, spoon and spades, pry bar, ratchets, anvil, hammer, various hand tools, belt and hooks for climbing poles, man lift, ladder, various testers, high pots, shivs, blocks, torch, pumps, air monitor, locator, flag stands, signs, crimpers, heater, generators, cutters, battery cutters and ratcheting cutters.

PPE:

Head protection, safety vest, gloves (high and low voltage), harness, belts, ear protection, eye protection, leather footwear, escape respirator, knee pads, and insulating blankets.

PHYSICAL REQUIREMENTS

Frequency Scale	Strength	Work Pattern
N = Never	<input type="checkbox"/> Sedentary	<input checked="" type="checkbox"/> Full-time
S = Seldom (1-10 %, up to 48 min)	<input type="checkbox"/> Light	<input type="checkbox"/> Part-time
O = Occasional (11-33%, 49 min. – 2 hr 40 min)	<input type="checkbox"/> Medium	<input type="checkbox"/> Seasonal
F = Frequent (34-66%, 2 hr 41 min – 5 hr 20 min)	<input type="checkbox"/> Heavy	10 Hours Per Day
C = Constant (67-100%, more than 5 hr 20 min)	<input checked="" type="checkbox"/> Very Heavy	4 Days Per Week
		FLSA Exempt <input type="checkbox"/> Yes <input type="checkbox"/> No

Work Pattern (continued)

Optional on most occasions but can be required in emergency situations. Up to 1,200 hrs./year of overtime can occur. Prevalence/need of overtime varies depending on the season.

Job Demand	Frequency and Weight (lbs.)					Activity Description
	N	S	O	F	C	
Lifting floor – waist		51-170	21-50	11-20	1-10	<p>Up to 30 min./time, 6 hrs. total with various hand tools, parts, accessories, small power tools, etc. up to 10 lbs.</p> <p>Up to 10 min./time, 4 hrs. total with hot sticks, chainsaw, power tools, canvas bag with tools, pulling gear, barricades, etc. 11-20 lbs.</p> <p>Up to 10 min/time, 2 hrs. total with power tools wires, equipment, accessories, insulators, cross arms, etc. 21-50 lbs.</p> <p>Up to 1-2 min./time, 1-2 hr. total with coils of wire, parts, vault lids, cross arms, feeder arms etc. 51-100 lbs.</p> <p>Feeder arm 0-2 times a day and moving an injured coworker in the case of an emergency. Also rarely hoist switches with up to 170 lbs. of force.</p>



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Job Demand	Frequency and Weight (lbs.)					Activity Description
	N	S	O	F	C	
Lifting waist-shoulder		51-170	21-50	11-20	1-10	<u>See description above in lifting floor to waist.</u>
Lifting above shoulder		21-50 51-100	11-20	1-10		<p>Up to 5 min./time, 3 hrs. total with various hand tools, parts, accessories, small power tools, etc. up to 10 lbs.</p> <p>Up to 5 min./time, 2 hrs. total with hot sticks, chainsaw, power tools, canvas bag with tools, pulling gear barricades, etc. 11-20 lbs.</p> <p>Up to 1 min/time, 20 min. total with power tools wires, equipment, accessories, insulators, cross arms, etc. 21-50 lbs.</p> <p>Up to 30 sec./time, 5 min. total while manipulating coils of wire, parts, cross arms, switches, switch parts, feeder arms etc. 51-100 lbs.</p>



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Job Demand	Frequency and Weight (lbs.)					Activity Description
	N	S	O	F	C	
Carry (Distance/Surface)			1-100			Up to 100'/time, 1.5 hrs. total to set out of pick up multiple cones (30#). 20' to carry tools (1-50#) between truck and site; parts, material sack, 4' pieces of cedar poles, power tools, cross arms, feeder arms, etc.
Pushing/Pulling (Distance/Surface)		51-170	21-50	11-20	1-10	<p>Up to 30 min./time, 6 hrs. total with various hand tools, parts, accessories, small power tools, etc. up to 10 lbs.</p> <p>Up to 10 min./time, 4 hrs. total with hot sticks, chainsaw, power tools, canvas bag with tools, pulling gear, barricades, etc. 11-20 lbs.</p> <p>Up to 10 min/time, 2 hrs. total with power tools wires, equipment, accessories, insulators, cross arms; Stringing loose lines, securing fixtures, using hand tools, hand lining materials, using chain hoists and tool sack, etc. 21-50 lbs.</p> <p>Up to 1-2 min./time, 1-2 hr. total with coils of wire, parts, vault lids, cross arms, feeder arms etc. 51-100 lbs.</p> <p>Feeder arm 0-2 times a day and moving an injured coworker in the case of an emergency. Also rarely hoist switches manually when a pole is not accessible by truck; with up to 150-170 lbs. of force.</p>

Physical Demands	Frequency					Activity Description
	N	S	O	F	C	
Sitting						Up to 30 min./time, 1 hr. total while driving to job sites in a truck.
Standing						Up to 30 min./time, 6 hrs. total on concrete/asphalt/wood/fiberglass while performing job duties in/on the tower truck as well as when performing safety watch, testing and inspecting duties. The employee also stands while assembling or wiring switches.
Walking						Up to 5-10 min./time, 5.5 hrs. total on hard surfaces for distances of 600 feet, (most commonly walks on 8x16 hard fiberglass deck), while repairing, installing, or troubleshooting trolley systems when on a tower. The employee also walks when traversing between the work site and work truck as well as when performing inspections.



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Physical Demands	Frequency					Activity Description
	N	S	O	F	C	
Perform Work on Ladders						
Climbing			X			Up to 5 min./time, 1 hr. total, 30-250' on poles, vertical ladders in vaults, ladders propped against building structures. Getting in/out of truck 16x day, climbing in to boom bucket.
Balancing				X		Up to 2.5-3 hrs./time, 5-6 hrs. total on a tower truck at heights of 10-25' while working on the tower truck or in a lift bucket performing line installations, trouble shooting, testing and maintenance.
Bending Neck Up				X		Up to 2.5-3 hrs./time, 5-6 hrs. total while performing overhead work on the deck as well as inspecting lines.
Bending Neck Down				X		Up to 2.5-3 hrs./time, 5-6 hrs. total while communicating with ground crew, assembling parts, installing parts, etc.
Stooping / Bending				X		Up to 30 min./time, 4 hrs. total terminating underground cables in vaults, cleaning brush, cleaning up job site, reaching for items out of the bucket, etc. Also occurs while worker is bent forward at the waist to crank the chain hoist to raise tension on wires.
Twisting at Neck			X			Up to 10 min./time, 1.5 hrs. total while working in climbing hooks, hand-lining materials bag, working in small spaces in vaults, etc.
Twisting at Waist			X			Up to 10 min./time, 1.5 hrs. total while hand-lining materials bag, working in small spaces in vaults, trimming brush, using hot poles, etc.
Squatting / Kneeling			X			Up to 5 min./time, 1.5 hrs. total on concrete, asphalt, fiberglass and wood surfaces while working on the tower and performing installations/maintenance, testing, assembling switches on the tower. Worker must also crouch while installing cable in vaults.
Crawling		X				Up to 2 min./time, 10 min. total while crawling under equipment while in a tower truck or when working on the deck.
Reach waist to shoulder				X		Up to 5 min./time, 4-6 hrs. total while handling tools in tower truck and on ground. Using grips, cranking hoists, climbing on/off trucks, using hot sticks, manipulating wires, using hand/power tools, placing tension on wires, etc.
Reach above shoulder				X		Up to 5 min./time, 4-6 hrs. total while working with tools and equipment above shoulder. Worker will perform this task until the tension is set on wires while reaching overhead and away from body to crank chain hoist, exerting up to 100 pounds of force to raise tension on wires. Working with high voltage lines and performing work that is 80% over head to eye level. While installing overhead hardware (cam tips), worker will perform up to 1 hour of overhead hammering with a 20-pound anvil.
Reach below waist			X			Up to 3 min./time, 2.5 hrs. total while retrieving tools and materials at lower levels, hand lining up parts/tools, shoveling, setting up platform safety rails, and assembling switches.



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	N	S	O	F	C	
Wrist Flexion/Extension				X		Up to 5-10 min./time, 6 hrs. total while pounding out kinks in wire, putting tension on wire, manipulating materials/tools, installing whips, using a chainsaw, using a hoist and using various hand tools.
Handle/Grasp				X		Up to 5-10 min./time, 6 hrs. total while pounding out kinks in wire, putting tension on wire, manipulating materials/tools, installing whips, using a chainsaw, using a hoist and using various hand tools.
Forceful Grasp			X			Up to 1-2 min./time, 1-2 hr. total while manipulating coils of wire, parts, thumper, vault lids, cross arms, feeder arms etc. (51-170 lbs.). Cutting wires and moving an injured coworker in the case of an emergency.
Fine Finger Manipulation				X		Up to 10 min./ time, 4 hrs. total with bolts, washers, nuts, rings, springs, fuses, wiring, wire nuts, taping, manipulating small parts.
Hand Controls		X				Up to 2 min./time, 30 min. total while operating tower truck lift controls.
Foot Controls						30 min./time, 1.5 hrs. total while driving and operating boom truck, derrick trucks and various other vehicles.
Repetitive Motion			X			Body Part: Upper extremities Cycles/hr: 200
Vibratory Tasks – High						10 min./time, 30 min. total with a jackhammer, hydraulic tamp, drills, impact tools, chainsaw, jack hammer, etc.
Vibratory Tasks – Low			X			10 min./time, 1.5 hrs. total with various power tools.
Talking				X		Continuously converses with coworkers throughout the day, via radio, telephone or in person for safety purposes, hot sticking, unsecured overhead load, etc. Talks with the general public and dispatchers a well.
Hearing				X		Employee continuously hears for moving equipment, vehicles, equipment failures, crane directions and various other hazards.
Visual – Near Acuity				X		Gauges, mirrors, wires, parts, switches and truck controls.
Visual – Far Acuity				X		Driving and operating equipment. Performing safety watch. Patrolling to inspect lines.
Visual – Depth Perception				X		Driving and operating equipment. Working around high voltage.
Visual – Color Discrimination				X		Colors of wires.
Visual – Accommodation				X		Looking between gauges and traffic while driving; looking between elevated areas and ground for safety purposes.
Visual – Field of Vision				X		Driving, operating heavy equipment. Working near high voltage.
Exposure to Weather				X		The job is performed outdoors, potentially in inclement weather.
Extreme Cold		X				Freezing temperatures during snowstorms etc.
Extreme Hot		X				Works around hot equipment; engines etc. Rarely extremely hot days while wearing AR clothing



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	N	S	O	F	C	
Wet and / or Humidity			X			Hoses, wet vaults.
Proximity to Moving Mechanical Parts					X	Continuously in/around moving vehicles
Exposure to Explosives				X		Various fuels/fumes. Potential electrical explosion.
Atmospheric Conditions			X			Dust, exhaust fumes, asphalt fumes.
Exposed Heights		X			X	Truck bed/rail; on top of equipment. Bucket trucks, poles, towers.
Exposure to Electricity					X	Continuously works on/around high voltage.
Exposure to Toxic / Caustic Chemicals			X			Asbestos fibers, wood preservatives on poles, PCB, etc.
Exposure to Radiation	X					
Noise Intensity	<input type="checkbox"/> Very Quiet <input type="checkbox"/> Quiet <input checked="" type="checkbox"/> Moderate <input checked="" type="checkbox"/> Loud <input checked="" type="checkbox"/> Very Loud					Employee is exposed to noise while driving and is also exposed to loud machinery such as vactor trucks, diesel trucks, etc.
Other:						

Analyst's Comments:



Fiberglass floored platform/lift truck. Safety railings on platform are manually lifted in to place with 50 lbs. of force. Platform is accessed via rear fixed ladder.



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Possible Employer Modifications:

Update Comments (*if applicable*):



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Note: The information for this job analysis was gathered by either on-site observation, interview and / or is representative of the labor market as indicated on page one. Additional data may have been obtained from standardized industry resources such as the DOT, GOE, COJ, OOH, WOIS and O-NET. 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.

Analyst:


Kyle Pletz, VRC, CDMS (Aug 16, 2022 10:56 PDT)

Update (if applicable):

Kyle Pletz, VRC, CDMS

Aug 16, 2022

Vocational Consultant

Date

Vocational Consultant

Date

Employer Verification: 
Layne Eddy (Aug 16, 2022 10:55 PDT)

Employee Verification: (optional)

Layne Eddy

Aug 16, 2022

Name

Date

Name

Date



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MEDICAL PROVIDER:

- ☐ I agree that the employee can perform the physical activities described in this job analysis and can return to work. Date employee is released to return to work if different from today's date: _____
- ☐ I agree the employee can perform the described job but only with modifications (describe in comments section). Modifications are needed on a ☐ permanent basis or ☐ temporary basis.
- ☐ The employee **temporarily** cannot perform this job based on the following physical limitations:

Anticipated release date: _____

Treatment plan: _____

- ☐ The employee is **permanently** restricted from performing the physical activities described in this job analysis based on the following physical limitations (state objective medical findings):

Comments:

Signature

Date

Print Name

- ☐ Attending Physician ☐ Consulting Physician ☐ Pain Program Physician
- ☐ IME Physican ☐ PCE Therapist ☐ OT / PT Therapist ☐ PEP Physician









KCJA Utility Line Worker 5-11-22

Final Audit Report

2022-08-16

Created:	2022-08-16
By:	Kyle Pletz, VRC, CDMS (kpletz@nim.vocmail.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAtb9NRL66X5xJKOeeVuq6-hl1ROxi_y-3

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-  Document created by Kyle Pletz, VRC, CDMS (kpletz@nim.vocmail.com)
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