



Electricity Human Resources Canada is a non-profit organization supporting the human resources needs of the Canadian electricity sector.

Job Demands Assessment: Utility Arborist



This project is funded by the Government of Canada's Sectoral Initiatives Program.

Job Demands Assessment: Utility Arborist

The purpose of a Job Demands Assessment (JDA) is to document the bona fide essential duties of a task. These assessments can be used for:

- Return to work planning
- Allowing medical professionals to evaluate job offers for suitability
- Determining job and task suitability
- Determining the likelihood that a job or task contributed to an injury
- Assisting Rehabilitation Specialists set up effective treatment protocols
- Training employees
- Hiring practices and Post Offer Pre-employment hiring programs
- Identifying ergonomic hazards

Using the JDA

This JDA is purposely generic in nature to ensure applicability across various organizations. The JDA is meant to serve as a benchmark document that provides an overview of the most common physical demands associated with the occupation. Not all tasks could be observed during the assessment process; instead, the most common tasks have been assessed.

Where applicable, potential accommodations are noted to illustrate alternative means for achieving the required demand or action.

This JDA can be used by Medical Practitioners / Health Care Providers involved in return to work rehabilitation support, and workplace accommodations to identify the Major Essential Demands that can be Performed, Modified, or Avoided by an individual based on their capacity and ability.

Acknowledgements

This JDA was completed by [ERGO Inc.](#), an Ergonomics, Injury Prevention & Safety Consulting & Training Firm that has been providing Canadian companies with practical ergonomic and injury prevention solutions for over 25 years.

Electricity Human Resources Canada and ERGO Inc. would like to thank the [Electricity Industry Training Institute Global](#) for allowing us onsite to complete the JDA in Abbotsford, BC (December, 2021).

Position: **Utility Arborist**

Date of On-Site Assessment: **December 16, 2021**

General Information

Job Description	<p>Statement of Overall Job Description: A Utility Arborist is responsible for pruning, felling and removing vegetation that is near energized power lines and associated electrical equipment in urban, rural and off-road sites. They also apply or oversee the application of herbicides to control vegetation. Services are provided as part of a utility's Vegetation Management Program or Post-Storm Clean-up and involves work in different geographical regions. Work is typically performed in teams of three Arborists with one assigned to aerial lift or tree pruning and other team members providing ground assistance.</p> <p>Tasks of a Utility Arborist include:</p>	<p>Approx. % of Time Spent Performing Each Task</p> <p><i>Amount of time spent traveling will vary depending on job location. When environment allows, aerial lift is used.</i></p>
	<p>1. Job planning, equipment and site safety check and travel to job site - Safety tailboard prior to commencing work outlining safety hazards and job planning. Complete equipment safety inspections for harnesses, ropes, climbing gear and aerial equipment. Includes review of Emergency Response Plan (aerial lift) and Rescue Plan (tree climbing). Rural work sites involve longer travel durations.</p>	<p>15-20% Travel to site average 20-90 min</p>
	<p>2. Preparing the work area - Includes moving equipment to planned work area and setting up safety perimeter. May require walking and carrying equipment to work site and removing underbrush.</p>	<p>5%</p>
	<p>3. Control vegetation - Includes pruning and removing trees using aerial work platform. Complete safety inspection of truck and aerial work platform, set up for job allowing for boom and aerial lift positioning, donning safety harness, climbing into bucket with tools and raising bucket to desired location. Using hydraulic trim saw, pole pruners or insulated tools. Tree blocks are dropped directly into a drop zone or lowered using rigging. Pruning tasks can vary from ~15 mins per tree to 4 hours/tree. The aerial lift truck is moved by crew as needed. Arborist may move in and out of bucket ~ 10/day. Aerial pruning varies between companies and may be completed for full/multiple days.</p> <p>4. Control vegetation - Includes pruning and removing trees using climbing methods. Includes carrying equipment into work area, setting up safety perimeter, climbing trees using harnesses, rigging, chain and hand saws. Tree blocks are dropped directly to a drop zone or lowered using rigging. Climbing is used in rural or urban settings where aerial lift equipment cannot be used. Climbing varies between companies and may be completed for full/multiple days.</p>	<p>75-90% Note: could be combination of in-tree pruning or aerial lift pruning.</p>
	<p>5. Safety watcher – Assigned daily to one of the ground crew members. Ensure that limits of approach are being maintained by aerial lift operator. Team member also complete other ground related tasks.</p>	
	<p>6. Clean up and post site assessment - Includes support provided by ground assistance team members. Grounds worker carries or drags blocks of wood, tree branches into piles or loads directly into wood chipper. Depending on environment, blocks/branches may need to be moved up to 100ft. In rural areas, debris is often mulched using chain saws to limit fire hazards/fuel load.</p>	<p>75-90%</p>
	<p>7. Computer and/or paper tasks - Completion of work orders and safety documentation (inspections and tail boards). Communication with utility control centre when working with energized lines (holder of permit communicates).</p>	<p>5%</p>
	<p>8. Applying herbicide - Typically performed on an irregular basis and time spent on this task will vary between geographical regions. Requires specialized training and qualifications. Different approaches used (backpack, machines, ATVs, helicopter).</p>	<p><1% Note: Arborists may spend greater amounts of time on this task.</p>
Work Load	<p>Arborists generally work in teams of three with minimum teams of two. For larger jobs there may be multiple teams in one location. One Arborist is assigned to aerial lift or tree pruning and other team members providing ground assistance. Varies based on assignment as outlined in Job Description.</p>	
Work Schedule	<p>Varies by company. Typically, day shift Monday – Friday, 8-hour shifts. May involve overtime and working during emergency situations (e.g., storm management).</p>	

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Work Environment

Description: Working near energized lines following limits of approach (~90%). May be working on the ground, on aerial lift or climbing trees. Terrain may vary depending on work location (rural, urban, rock and/or bush). Working in wet (e.g. mud) and winter (e.g. snow/ice) conditions may increase the physical demand levels. In addition, balance and agility demands increase in winter conditions. Awkward posture and footing may be required to climb onto equipment, into vehicles, climbing trees or in the bush. In some regions, snowshoe use &/or handling/unloading a snow machine/ATV/boat may be required.

Working Heights: Work performed from ground to heights of ~ 120ft. Aerial lifts can go to ~100ft.

Working Reaches: Typically reaches within arm's reach (24"-30") using chainsaws, trimming, hand saws and rigging equipment. Operating insulated tools requires work at extended reaches (typically 6-12ft extensions when using insulated tools).

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Pictures of Main Job Tasks



Typical gear worn and carried



Ground worker



Chain saw work (ground) and carrying blocks



Brush clean up



Tree climbing



Tree climbing



Using chain saw



Working out of aerial lift

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Pictures of Main Job Tasks



Removing rigging ropes



Removing rigging ropes

Not all tasks within the occupation were being performed at the time of data collection (aerial and chipping work not observed). The data reported in this document is based on the measurement of available equipment, observation, mockup of some tasks, review of additional information provided by on site workers and training personnel, as well as a description of other tasks that were described as part of the Utility Arborist occupation. This JDA may not be 100% representative of any one job site, as demands may vary based on Company and location.

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Summary of Major Essential Demands

For further details refer to the tables on the following pages

To be completed by Health Care Provider — Please check one:

	Able to Perform	Modification Required (Explain)	Unable to Perform
Frequent to constant one- and two-handed lifting (typical 12lbs to 60lbs, max. 120lbs), floor to shoulder, overhead reaching frequent for rigged pieces during ground support.			
Frequent to constant one- and two-handed carrying (typical 12lbs to 60lbs, max. 120lbs) of equipment and wood blocks/branches. Constant wearing of safety equipment weighing 12-54 lbs. Heavier equipment (54lbs) during climbing tasks.			
Frequent one- and two-handed horizontal pushing/pulling of wood blocks/branches off a limb or tree, from tree to wood chipper and into wood chipper (typical 12-30lbs, max. ~ 150lbs, distance ft) of 1-100ft. Pulling on ropes and rigging (~150lbs).			
Occasional sitting in vehicle (1-3 hours/shift) and on ground/tree (during breaks).			
Constant standing on flat, uneven, icy or slippery surfaces, in trees or on aerial lift.			
Occasional to frequent walking on flat, uneven, icy or slippery surfaces, typical 30-100ft, max. 4-5 km per day.			
Frequent to constant gripping/handling with both hands (typical estimated lift weight of 11-35 lbs, max. 120bs. Static gripping using pruning and hand tools, chain and hydraulic trim saws, blocks of wood and branches.			
Frequent to constant pinching/fingering with one and both hands (typical force 2-15lbs), to type and write, handling ropes, rigging, use climbing gear.			
Occasional squatting for low level task. Typically, <5 min at a time.			
Occasional kneeling for low level task. Typically, <5 min at a time.			
Frequent to constant climbing and balancing during climbing tasks in trees, into/out of aerial device, into/out of vehicles, in brush and on uneven/icy/slippery terrain.			
Occasional driving to the worksite. Typically, 1-3 hours/shift.			
Moderate back repetition (all directions) with periods of static back postures (setting up rigging, trimming in aerial device, use of chain saw). Full range required.			
Moderate neck repetition (all directions) with periods of static neck postures (safety watching, achieve adequate viewing or positioning). Full range required.			
Moderate bilateral shoulder repetition (all directions) with periods of high repetition (climbing) and periods of static postures, particularly holding rigging, use of chain/trim and insulated tools. Full range required.			
Moderate bilateral elbow repetition (all directions) with periods of high repetition (climbing) and static postures during tool use. Full range required.			
Moderate bilateral wrist repetition (all directions) with some static wrist postures during tool use. Full range required.			
Excellent visual acuity, problem solving, task organization, memory and attention to detail (technical and for safety), as well as team communication critical to the task. Good hearing, reading, writing, and tactile / feel capabilities required.			

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Demand / Action		Check if Performed	Description & Potential Accommodations <i>*Accommodation options noted in green</i>
Sensory	Hearing / Speech:		
	• Conversation	✓	In person with other crew members. Listening to surroundings (windstorms, chain saws, traffic, air horns in emergency situations). To Control Centre/Supervisors via cellphone or radio.
	• Signals	✓	
	Vision:		Safety inspections (gear & equipment), tying knots, using rigging and hand tools. To read from computer/paper /phone. To drive vehicle, position aerial lift, work with ropes, check environment and people in work zone.
	• 20 inches or less	✓	
	• 20 feet or more	✓	May use colour for rigging ropes and equipment.
	• Colour	NE	Depth perception to work in proximity to energized equipment and to estimate how close to limits of approach.
• Depth Perception	✓	To climb onto/off equipment, make cuts, use rigging and seat ropes for climbing.	
	Smelling	NE	May be used to assess tree decay.
	Tactile / Feeling	✓	Majority of work requires visual verification. Tactile/feeling to handle ropes/equipment during tree pruning.
Environment	Conditions of Work		Work at heights of up to 120ft accessed via aerial lift or tree climbing. Majority of work outdoors in all weather conditions (>95%) Standing in aerial lift, on trees using climbing equipment, in brush, on rocky surfaces or in urban areas (backyards, pavements). Working in wet (e.g. mud) and winter (e.g. snow/ice) conditions may increase the physical demand levels. In addition, balance and agility demands increase in winter conditions. May be exposed to animal/insect bites, poisonous plants.
	Temperature / Humidity		All seasons & weathers. Exposed to heat, cold, rain, snow and wind. Unable to work in winds > 50km/hr, thunder/lightening or during forest fire hazards. Includes working around frozen trees and in temperatures up to ~40°C (summer).
	Noise		Noise from chain saws requiring hearing protection. Noise levels not measured.
	Vibration		Hand-arm vibration from chain saws, trim saws & wood chipper. May be exposed to whole body vibration when traveling over rough terrain. Occasional use of stump grinder.
	Walking / Working Surface		Uneven terrain (gravel, brush, ice, rocky). Use of spurs to climb trees with limited footholds and may be slippery. Climbing on and off aerial lift and bucket truck. Surfaces can sway in higher wind conditions.
	Lighting		Use of headlamps and portable lighting during storm or winter conditions.
	Electrical		Working close to energized equipment (120V to 500KV). Use of insulated tools, limits of approach and utility company work permits.
	Sharp Objects		Tools (hand saws, knives, axes, chain saws, trimming tools).
	Hot / Cold Hazards		Exposure to outdoor conditions. Gripping tools in cold, wet and icy conditions. Risk of forest fires during summer.
	Chemical / Dust		Gas for chainsaws, oil, herbicide, sawdust. Dust from gravel or underbrush in dry and hot conditions.
Tools	Moving Machinery / Equipment		Daily exposure to aerial lift, vehicular traffic, wood chippers. Use of rigging and ropes with items attached (throwball, hobbs device, chain saw, speedline, blocks of wood). May be exposed to pinch point hazards from machinery and rope friction burns when using rigging. Occasional work around excavators (larger projects).
	Hand / Sharp Tools		Hand saws, axes, pole cutters, hydraulic trim saw.
	Personal Protective Equipment		Safety boots, eye protection, long sleeve shirt and chain saw pants/chaps, bucket harness, climbing harness, Class E rated hard hat, electrical insulated gloves, rigging gear and FR Arc rated protective clothing.
	Other Equipment / Supplies		Gear bags, climbing gear, gasoline drum, ropes, laptop, manual and hydraulic pruners, chainsaws (different sizes), hot-sticks, hand saw, satellite phone, GPS.

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Demand		Rate Requirement	Description of Tasks that Demand is Required & Potential Accommodations <i>*Accommodation options noted in green</i>
Legend: NE = Not Essential ND = Not Daily but essential 5% or less = Rare Essential 6-33% = Minor Essential Demand >33% = Major Essential Demand			
Cognitive	Reading:		
	• English	Minor	Reading of job plans, work and safety procedures, tailboard documentation, computer mapping, and technical manuals. French documentation in some provinces.
	• French	Varies by Province	
	• Other	No	
	Writing:		
	• English	Minor	Safety documentation, job planning. French documentation in some provinces.
	• French	Varies by Province	
	• Other	No	
	Verbal Communication:		
	• English	Major	With team (crew assigned to) as well as Foreperson and Control centre. In person and via phone/radio. French communication in some provinces.
	• French	Varies by Province	
	• Other	No	
	Supervising Others	Major	Responsible for the safety of their team. Crew lead for each team.
	Working to Speed	Major	Work is time sensitive to complete within assigned work plan schedule. Due to high level safety and quality requirements, time is taken to perform the tasks carefully. Tasks may have expected completion times, but Arborists have some control over their task pacing.
	Self-Supervision/ Working Alone	Minor	Arborists generally work in a team of three. They may be not in direct visual contact when laying out work or walking a right of way, therefore check in procedures are in place for working alone.
	Computer Usage	Minor	Daily for safety documentation & completion/creation of work orders on mobile phone, laptop in vehicle (not all personnel on team).
	Math:		
	• Simple	Minor	Electrical math, typically performed in the head. Calculating working within safe limits of approach, checking amount needed to prune back, gauging distances when throwing ropes, calculating wood weights for cuts and rigging requirements.
	• Complex	NE	
	Memory:		
• Short Term	Major	To track the progression of tasks, safety job hazards and workplan standpoint to ensure each step completed accurately before moving on. Procedural information – both technical (technical manuals & work instructions available) and safety procedures. Prior experience informs troubleshooting and equipment usage (rigging, use of climbing and aerial lift, selection and usage of pruning equipment).	
• Long Term	Major		
Organization	Major	Required to ensure all steps are completed in order and to safety requirements (efficiency while performing task, how to best dismantle/prune a tree). Planning job site set up, positioning aerial lift, rope and equipment management, traffic safety plans.	
Decision Making	Major	Responsible for organization and completion of tasks. Responsible for safety sensitive decisions during the performance of tasks (limits of approach, use of rigging/aerial or pruning equipment). Working in remote locations, and varying weather conditions. May need to execute safety/rescue plans at a moments notice.	
Attention to Detail	Major	Failure to make sound decisions can be fatal (electrical contact, fall from height, crushing hazards, gear failure). Close attention to safety standards, safety procedures and work around energized equipment required for safety of self and crew and for completion of tasks to quality standards.	
Problem Solving	Major	In the event of an unexpected incident, e.g. tree or bucket rescue. Placement of aerial lift and use of pruning tools relative to energized equipment is critical and may have to approach from various positions and heights. Setup of rigging, impact of weather, placement of lifelines requires ongoing problem-solving during all operations. Reading road conditions in inclement weather. <u>Technical support/further guidance may be available from Supervisor.</u>	
Emergency Management	ND (but critical)	Responsible for self-rescue and rescue of team under any given condition (bucket and tree rescue preparedness training is practiced on a regular basis). EMS may not be close at hand if working in rural/remote settings.	

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Demand / Action		Check if Performed	Duration	Frequency	Description & Potential Accommodations <i>*Accommodation options noted in green</i>
Legend: NE = Not Essential ND = Not Daily Rare = 1-5% Occasional = 6-33% Frequent = 34-66% Constant = 67-100%					
Strength	Lifting	Two Hands	✓	Frequent to Constant <i>Note: does not include tool holding time (see gripping below)</i>	Varies with task Ground support- ~ 200 blocks of wood/branches (12-120 lbs) loaded into wood chipper /shift Lifting and holding chain saw/trimmer (12 lbs) for 4-6 hrs per shift.
		One Hand	✓	Tools frequent to constant throughout the shift. <i>Safety equipment worn at all times. Heavier equipment worn when climbing.</i>	Objects: Gear bag with climbing harness, tools and small chain saw (~54 lbs), climbing harness and tools (13-15lbs), bucket harness (5lbs), small chain saw (11lbs), medium chain saw (23lbs), larger chain saw (>23lbs), fuel can (~12 lbs), rope (13-15 lbs, dry weight), manual prune saw (2lbs), hydraulic trim saw with hose (12lbs), axe 3.5lbs, underbrush (~ 10-50lbs), Outrigger pads (20-30lbs), wheel chocks (5lbs), PPE (see worn objects below). Hobbs device- typ. 2-person (70lbs), wood blocks/branches (~12-120lbs) - Note- wood blocks heavier during wet/frozen conditions. Weight Max: ~80-120 lbs. Could be managing 1000lb piece of wood using rigging. Weight Typical: 12lbs (saws)- 25-30lbs (block of wood) Range of Lift: Ground level to below shoulder (chain and hand saws). Handling tools while working from a aerial lift or while climbing during pruning tasks. Above shoulder height for short periods using hydraulic trim saws/insulated tools and when setting up rigging. Reaching for rigged pieces (ground support) frequently involves above shoulder reaches.
	Carrying	Two Hands	✓	Frequent to Constant	Varies with task Up to 200 pieces of wood/branches (12-60 lbs) carried 15-100ft to chipper.
		One Hand	✓	<i>Safety equipment worn</i> Tools frequent to constant throughout the shift. <i>Safety equipment worn at all times. Heavier equipment worn when climbing.</i>	Carried Objects: See above. Longer carrying distances in urban areas. Worn Objects: Climbing harness, gear bag and small chain saw (54lbs), helmet (~2 lbs), bucket harness (5lbs), chain saw pants (~5lbs) Weight Max: 80-120 lbs, use 2-people to carry heavier branches. Weight Typical: 11-60 lbs carried, 12-66 lbs worn Distance: ~15-100ft Handles Present: gear bag/backpack, handles on chain saw and tools, no handles on wood/brush
	Pushing/Pulling	Two Hands	✓	Frequent	Varies with task, multiple times per shift
		One Hand	✓		<i>Safety equipment worn at all times. Heavier equipment worn when climbing.</i>
Mobility	Sitting	✓	Occasional	<u>Typically, 1-15 min at a time.</u> At start and end of shift, & breaks	Drive 1-3 hrs/shift depending on location. In vehicle, ground or in tree during breaks. Workers may choose not to come down from tree during breaks.
	Standing	✓	Constant	Working in aerial device, in tree or ground support.	Majority of work completed in standing. Static standing in the bucket or tree and may include reaching to move rigging or use saws/tools. May include stooped and side bending while using spurs and setting up rigging. When providing ground assistance, static standing on uneven, icy and slippery surfaces with intermittent walking during clean up tasks.
	Walking	✓	Occasional to Frequent	Higher for ground support team Intermittent throughout shift for aerial and climbing work.	Between truck & work area, typically 30-100ft. Can be up to 4-5 km/day if working in remote areas. Terrain more rugged in remote areas.
	Foot Activation	✓	Occasional	Start and end of shift, intermittently throughout the shift	To access site via truck and moving aerial lift between pruning locations. Typically driving 1-3 hours daily.

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Legend: NE = Not Essential ND = Not Daily Rare = 1-5% Occasional = 6-33% Frequent = 34-66% Constant = 67-100%					
Mobility	Crouching/Squatting	✓	Occasional	Varies with task. Intermittent throughout shift.	To check or remove gear from bag, to attach or remove rigging or lift blocks of wood or branches when chipping branches. Typically <5 min at a time. Surface may not be level.
	Kneeling	✓	Rare	Varies with task. Intermittent throughout shift.	To attach rigging, mulching with chain saw. Surface may not be level. Able to move around and take breaks.
	Climbing	✓	Frequent to Constant	Ascend & descend tree using climbing gear (1-8hrs/shift). Get into and out of the aerial lift (x10/shift).	Tree climbing using spurs (2-5 mins to first position in tree and then move as needed). May work in tree full shift or rotate to ground support tasks (~ 3-4 hours). Climb in/out of aerial lift (x10/shift), in/out of vehicle, over uneven/slippery/rocky terrain. Limited climbing if assigned ground support tasks only.
	Balancing	✓	Frequent to Constant	Varies with task. Highest when climbing.	Using climbing equipment, walking on uneven ground.
	Crawling		-	-	-
Dexterity	Gripping/Handling (Gross motor)		Frequent to Constant (both hands)	Multiple times per shift.	Objects: Majority of handling tasks requires use of both hands e.g., handling rigging/ropes/ carabiners, tools, chain and hand saws, pruners, trim saw, axe, steering wheel, loading wood chipper, handling under-brush/branches/blocks of wood. See lifting above. Force Max: 80-120 lbs Force Typical: 11-35 lbs Simulated grip force: holding tension on rigging (5-15lbs), pulling up small chain saw on rope (~35lbs), carabiner (~ 1-2lbs).
	Right Hand	✓			
	Left Hand	✓			
	Either	✓			
	Pinching/Fine Finger Movement		Frequent to Constant (both hands)	Multiple times per shift.	Objects: Tie/untie knots, check rope for fraying, check lifeline, open and close carabiners. To type on laptop, keyboard, or phone and to write tailboard. Basic chainsaw maintenance. Weight: Ropes (13-15lb dry weight), Carabiner (~ 1-2lbs)
	Right Hand	✓			
	Left Hand	✓			
Either	✓				
Hand/Eye Coordination	✓	Frequent to Constant	Throughout the shift	To use tools during pruning and cutting (chain and hand saws, trimmers, manual pruners, attaching rigging, using carabiners) while also working near energized equipment. During tree climbing and getting on aerial lift, setting up rigging (throwing ropes to specified places in tree), loading chipper and driving, during Emergency rescues. Climbing requires hand-eye-foot coordination.	

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Demand / Action	Check if Performed	Typical Posture Range of Motion (°)	Typical Repetition Rate/Hour	Description & Potential Accommodations <i>*Accommodation options noted in green</i>		
Neck Movement						
• Flexion (bent forward)	✓	<input checked="" type="checkbox"/> <20° <input checked="" type="checkbox"/> 20-45° <input checked="" type="checkbox"/> >45°	<input type="checkbox"/> <120 <input checked="" type="checkbox"/> 120-180 <input type="checkbox"/> >180 <input checked="" type="checkbox"/> STATIC	Neck flexion communicating with ground crew, moving around tree, to achieve adequate viewing for pruning or trimming, picking up wood blocks from ground. Typically, <45°, occasionally >45°.		
• Extension (bent backwards)	✓	<input type="checkbox"/> <5° <input checked="" type="checkbox"/> >5°			Extension for overhead work, e.g., assisting from ground, visual inspection of tree, setting up and viewing rigging, aerial pruning, providing ground and safety support.	
• Rotation (twist)	✓	<input type="checkbox"/> <45° <input checked="" type="checkbox"/> >45°		<input type="checkbox"/> <120 <input checked="" type="checkbox"/> 120-180 <input type="checkbox"/> >180 <input checked="" type="checkbox"/> STATIC	Static twisting may be required (both aerial and climbing) to achieve adequate viewing/positioning for pruning or trimming and while maintaining limits of approach.	
• Lateral Flexion (bent to side)	✓	<input type="checkbox"/> <5° <input checked="" type="checkbox"/> >5°			Static bending may be required (both aerial lift and climbing) to achieve adequate viewing/positioning for pruning or trimming and while maintaining limits of approach.	
Back Movement						
• Flexion (bent forward)	✓	<input checked="" type="checkbox"/> <20° <input checked="" type="checkbox"/> 20-45° <input checked="" type="checkbox"/> >45°	<input type="checkbox"/> <12 <input type="checkbox"/> 12-120 <input checked="" type="checkbox"/> >120 <input checked="" type="checkbox"/> STATIC	Back flexion varies to >45° when lifting and carrying blocks to wood chipper, clearing underbrush, using chain saw at ground level, and during aerial and climbing work. May be able to limit back flexion by adjusting height of branches during chain saw work on the ground or adjusting work positioning of aerial lift.		
• Extension (bent backwards)	✓	<input type="checkbox"/> <5° <input checked="" type="checkbox"/> >5°			Back extension >5° providing ground support while holding rigging and during aerial or climbing work when reaching for a branch or checking for overhead hazards.	
• Rotation (twist)	✓	<input checked="" type="checkbox"/> <15° <input checked="" type="checkbox"/> 15-30° <input checked="" type="checkbox"/> >30°		<input type="checkbox"/> <12 <input checked="" type="checkbox"/> 12-120 <input type="checkbox"/> >120 <input checked="" type="checkbox"/> STATIC	Rotation to 30° during climbing and aerial pruning, inspection of aerial lift, dragging branches and debris to chipper and general clean up tasks.	
• Lateral Flexion (bent sideways)	✓	<input checked="" type="checkbox"/> <20° <input checked="" type="checkbox"/> 20-45° <input checked="" type="checkbox"/> >45°			Side bending to 30° during climbing and aerial pruning, inspection of aerial lift, dragging branches and debris to chipper and general clean up tasks.	
Shoulder Movement (Dominant)						
• Flexion (raised in front of body)	✓	<input type="checkbox"/> <45° <input checked="" type="checkbox"/> 45-90° <input checked="" type="checkbox"/> >90°	<input checked="" type="checkbox"/> <90 <input checked="" type="checkbox"/> 90-150 <input type="checkbox"/> >150 <input checked="" type="checkbox"/> STATIC	Shoulder flexion varies to ~ 90° during aerial and climbing pruning (pole pruners, chain & trim saws, insulated tools), pushing wood blocks, setting up and using rigging and loading the chipper. Shoulder flexion intermittently to >90° flexion positioning ropes during climbing, using tools with extensions or retrieving cut pieces from rigging (ground work).		
• Extension (raised behind body)	✓	<input type="checkbox"/> <5° <input checked="" type="checkbox"/> >5°			Shoulder extension varies to > 5° when pulling ropes and holding trim saw.	
• Abduction (raised to side)	✓	<input type="checkbox"/> <45° <input checked="" type="checkbox"/> 45-90° <input type="checkbox"/> >90°			<input type="checkbox"/> <90 <input checked="" type="checkbox"/> 90-150 <input type="checkbox"/> >150 <input checked="" type="checkbox"/> STATIC	Static flexion and abduction operating chain/trim saws and insulated tools.
• Adduction (across body)	✓	<input type="checkbox"/> <45° <input checked="" type="checkbox"/> 45-90° <input type="checkbox"/> >90°				Reaching to the side or across the body (abduction and adduction) to retrieve items from climbing harness and to use trim saw during aerial work.
• Rotation (turned in/out)	✓	<input type="checkbox"/> <5° <input checked="" type="checkbox"/> >5°				
Shoulder Movement (Non-dominant)						
• Flexion (raised in front of body)	✓	<input type="checkbox"/> <45° <input checked="" type="checkbox"/> 45-90° <input checked="" type="checkbox"/> >90°	<input checked="" type="checkbox"/> <90 <input checked="" type="checkbox"/> 90-150 <input type="checkbox"/> >150 <input checked="" type="checkbox"/> STATIC	Reaching to the side or across the body (abduction and adduction) to retrieve items from climbing harness and to use trim saw during aerial work.		
• Extension (raised behind body)	✓	<input checked="" type="checkbox"/> <5° <input checked="" type="checkbox"/> >5°				
• Abduction (raised to side)	✓	<input type="checkbox"/> <45° <input checked="" type="checkbox"/> 45-90° <input type="checkbox"/> >90°				
• Adduction (across body)	✓	<input type="checkbox"/> <45° <input checked="" type="checkbox"/> 45-90° <input type="checkbox"/> >90°				
• Rotation (turned in/out)	✓	<input checked="" type="checkbox"/> <5° <input checked="" type="checkbox"/> >5°				

Posture & Joint Position

Position: **Utility Arborist**

Date of On-Site Assessment: **December 16, 2021**

Demand / Action		Check if Performed	Typical Posture Range of Motion (°)			Typical Repetition Rate/Hour	Description & Potential Accommodations <i>*Accommodation options noted in green</i>
Posture & Joint Position	Elbow Movement (Dominant)						
	• Pronation/Supination (palm down/up)	✓	<input type="checkbox"/> Neutral	<input checked="" type="checkbox"/> Partial	<input checked="" type="checkbox"/> Full	<input type="checkbox"/> <120 <input checked="" type="checkbox"/> 120-180 <input type="checkbox"/> >180 <input checked="" type="checkbox"/> STATIC	
	• Flexion/Extension (bent/straight)	✓	<input type="checkbox"/> Neutral	<input checked="" type="checkbox"/> Partial	<input checked="" type="checkbox"/> Full	<input type="checkbox"/> <120 <input checked="" type="checkbox"/> 120-180 <input type="checkbox"/> >180 <input checked="" type="checkbox"/> STATIC	
	Elbow Movement (Non-dominant)						
	• Pronation/Supination (palm down/up)	✓	<input type="checkbox"/> Neutral	<input type="checkbox"/> Partial	<input checked="" type="checkbox"/> Full	<input type="checkbox"/> <120 <input checked="" type="checkbox"/> 120-180 <input type="checkbox"/> >180 <input checked="" type="checkbox"/> STATIC	
	• Flexion/Extension (bent/straight)	✓	<input type="checkbox"/> Neutral	<input type="checkbox"/> Partial	<input checked="" type="checkbox"/> Full	<input type="checkbox"/> <120 <input checked="" type="checkbox"/> 120-180 <input type="checkbox"/> >180 <input checked="" type="checkbox"/> STATIC	
	Wrist Movement (Dominant)						<p>Gripping with both hand hands on a frequent basis using all tools and equipment (manual prune saw, trim saw, chain saw, hand saw, rigging, opening/closing carabiners, tying knots, loading wood chipper, clean up tasks, using sling shot, driving).</p> <p>Static gripping increases when holding rigging (ground work), carrying cut blocks/branches, holding chain saw during larger cuts and use of hydraulic trimmer.</p>
	• Flexion/Extension (bent up/down)	✓	<input type="checkbox"/> Neutral	<input type="checkbox"/> Partial	<input checked="" type="checkbox"/> >½ range	<input type="checkbox"/> <900 <input checked="" type="checkbox"/> 900-1800 <input type="checkbox"/> >1800 <input checked="" type="checkbox"/> STATIC	
	• Deviations (bent to side)	✓	<input type="checkbox"/> Neutral	<input type="checkbox"/> Partial	<input checked="" type="checkbox"/> >½ range	<input type="checkbox"/> <900 <input checked="" type="checkbox"/> 900-1800 <input type="checkbox"/> >1800 <input checked="" type="checkbox"/> STATIC	
	Wrist Movement (Non-dominant)						
• Flexion/Extension (bent up/down)	✓	<input type="checkbox"/> Neutral	<input type="checkbox"/> Partial	<input checked="" type="checkbox"/> >½ range	<input type="checkbox"/> <900 <input checked="" type="checkbox"/> 900-1800 <input type="checkbox"/> >1800 <input checked="" type="checkbox"/> STATIC		
• Deviations (bent to side)	✓	<input type="checkbox"/> Neutral	<input type="checkbox"/> Partial	<input checked="" type="checkbox"/> >½ range	<input type="checkbox"/> <900 <input checked="" type="checkbox"/> 900-1800 <input type="checkbox"/> >1800 <input checked="" type="checkbox"/> STATIC		

Position: **Utility Arborist**Date of On-Site Assessment: **December 16, 2021**

Optional Form

Can be used for Accommodation and Return to Work. **To be completed by employee's medical practitioner/ health care provider (do not include diagnosis).**

Employee's Name:

Are there any medical/health conditions that account for absence(s) from the workplace or would affect the employee's ability to perform his/her duties?

Yes **No**

If yes, describe the employee's specific work-related limitations and/or restrictions.

Indicate duration of limitation(s) and/or restriction(s) identified above. **Permanent** **Temporary**

If temporary, what is the expected duration?

Is employee involved in treatment and/or taking medication that may affect his or her ability to work, including regular attendance, and/or performing certain duties? **Yes** **No**

If yes, describe the impact (i.e. medication may cause drowsiness, safety risk related to treatment, treatment requires intermittent absences from work.)

Are any further absences from work (e.g. surgery) anticipated at this time? **Yes** **No**

If yes, please specify:

When is the date of your next assessment?

Name and address of medical practitioner/health care provider completing this form:

