

Job Demands Analysis – Cemetery Truck Driver II (Community Services)

Purpose

The Cemetery Truck Driver II working for the City of Vancouver's Community Services Group is responsible for planning, scheduling and carrying out all work necessary to provide the key components of cemetery service including interments, disinterments, landscaping and memorial installations on a day to day basis.

Essential Duties

The Cemetery Truck Driver II has four essential duties:

- Duty #1 Cremation and Niche Wall
- Duty #2 Setting and Removal of Markers
- Duty #3 General Labouring
- Duty #4 Back Hoe Operation

Description of Non-essential Tasks

Not applicable

Summary of Demands

	Sedentary	Light	Medium	Heavy	Very Heavy	Comments
Physical				✓		Based on strength requirements
Cognitive					✓	Ability to interact appropriately with cemetery customers; No tolerance for error in locating graves

Workers require **physical endurance** due to manual material handling tasks (i. e., for between 34-66 % of their shift) as well as standing and walking continuously (i. e., for between 34-66 % of their shift).

Shift Structure

The Cemetery Truck Driver II works Monday through Friday from 7:30 am to 4:00 pm.

The Cemetery Truck Driver II is allowed one 30-min lunch break and two 10-min breaks.

Frequency Rating Definitions

The frequency rating definitions used in the Summary Table are from the Dictionary of Occupational Titles (DOT, 1991, 4th edition) published by the US Department of Labor.

A similar classification is used for each Essential Duty, but the percentages are changed to reflect % of Duty rather than % of shift.

	Time per Day	Percentage of Shift
Never	0 minutes	0 %
Rare	0 - 5 minutes	0-1 %
Infrequent	6 - 25 minutes	2-5 %
Occasional	26 minutes – 2.5 hours	6-33 %
Frequent	2.6 - 5.25 hours	34-66 %
Constant	5.26 - 8 hours	67-100 %

STRENGTH	
Strength Category	Weight Handled
1. Limited	Up to 5 kg.
2. Light	5 kg. to 10 kg.
3. Medium	10 kg. to 20 kg.
4. Heavy	>20 kg

Job Demands Analysis – Cemetery Truck Driver II: Summary Table

a. Physical Demands		Frequency During Shift						Weight		Comments
		Never	Rare	Infrequent	Occasional	Frequent	Constant	Usual (kg)	Max (kg)	
Strength	Lifting – Floor to Knuckle					✓		12	32	Plates; markers; sods; shovel with soil; 34"x42" board with excess soil; auger; 4' x 8' boards; lowering device; walking board
	Lifting – Knuckle to Waist					✓		12	32	Cremation table; plates; markers; sods; shovel with soil; pails of excess soil; 4' x 8' boards; lowering device; walking board
	Lifting – Over Shoulder			✓				10	19	Plates
	Carrying – with Handles			✓				16	23	Suction cup case; pails of water to wipe markers; pails of excess soil; auger
	Carrying – without Handles					✓		10	32	Urn; cremation table; plates; markers; sods; 34"x42" board with excess soil; 4' x 8' boards; walking board
	Pushing – Upper Extremity				✓					Pushing urn in niche wall; digging hole; removal of sods
	Pushing – Hips/Legs assist					✓		11		Shovelling (pushing sods up, adjusting markers; digging hole); pushing down on auger into ground; removal of sods; push lowering device onto rack; push cart of walking boards
	Pulling – Upper Extremity				✓					Pulling plates out; pulling up discs
	Pulling – Hip/Leg Assist					✓		21		Shovelling; pulling up auger from ground; pull lowering device off rack

Job Demands Analysis – Cemetery Truck Driver II: Summary Table (continued)

a. Physical Demands (continued)		Frequency During Shift						Comments
		N	R	I	O	F	C	
Mobility	Reach - Shoulder or Above				✓			Trimming trees
	Reach - Below Shoulder						✓	
	Handling						✓	Tools
	Fine finger movements					✓		Finesse required when placing plates; controls on radio, crane, ProGator, backhoe
	Neck - Static Flexion			✓				Digging grave (1/2 hour)
	Neck – Static Neutral			✓				
	Neck – Static Extension	✓						
	Neck – Rotation						✓	
	Throwing		✓					Salt
	Sitting				✓			Driving ProGator, backhoe
	Standing					✓		
	Walking					✓		Walking to find disc
	Running/Jumping	✓						
	Climbing			✓				Climbing in / out of backhoe (step hts. - 17", 14½", 8½")
	Bending/Stooping					✓		Using auger; lifting markers; digging hole, wiping dust off containers; lifting pails of excess soil; removing sods; placing boards on ground
	Crouching			✓				While removing plates using suction cup
	Kneeling			✓				
	Crawling	✓						
	Twisting				✓			Depends on work habits (if not turning feet)
	Balancing			✓				On steps of backhoe
	Travelling				✓			ProGator, backhoe

Job Demands Analysis – Cemetery Truck Driver II: Summary Table (continued)

a. Physical Demands (continued)		Frequency During Shift						Comments
		N	R	I	O	F	C	
Sensory / Perception	Hear/Conversations					✓		Radio; working with dump truck operator
	Hear/Other Sounds						✓	Driving ProGator, backhoe
	Vision/Far						✓	Driving ProGator, backhoe
	Vision/Near						✓	Driving ProGator, backhoe
	Vision/Colour				✓			Colour of markers
	Vision/Depth						✓	Driving ProGator, backhoe
	Perception/Spatial						✓	
	Perception/Form						✓	
	Feeling						✓	Need firm grip on markers so they don't slip and fall
	Speech					✓		Radio; working with dump truck operator
Work Environment	Inside Work	✓						
	Outside Work						✓	
	Slippery						✓	Depends on weather, steps on backhoe
	Congested worksite	✓						
	Chemical Irritants	✓						
	Confined Space Entry	✓						
	Vapour Fumes	✓						
	Noise				✓			Proximity to loud equipment (backhoe, lawnmower, weed eater)
	Proximity to moving objects				✓			Backhoe, dump truck, vehicles
	Hazardous Machines					✓		Crane
	Electrical hazard	✓						
	Hazardous objects	✓						
	Radiant/Thermal Energy	✓						
	Hot/Cold						✓	Constant during inclement weather
	Humid						✓	Constant during inclement weather
	Environmental Dust				✓			Dirt dust
	Organic Substances	✓						
	Medical Waste	✓						
	Blood Products	✓						
	Lighting – Direct						✓	Natural light outdoors
	Lighting – Indirect	✓						
	Vibration – Whole Body				✓			Backhoe
	Vibration – Hand/Arm	✓						

Job Demands Analysis – Cemetery Truck Driver II: Summary Table (continued)

b. Cognitive and Psychosocial Demands	Frequency During Shift			Comments
	Never / Rare	Infrequent / Occasional	Frequent / Constant	
Degree of Supervision	✓			
Time Pressure		✓		
Attention to Detail			✓	
Memory Requirements			✓	
Interact with co-workers		✓		
Interact with public		✓		
Work Alone			✓	
Reading		✓		Work orders; cemetery maps
Writing		✓		Work orders
Irregular Hours	✓			
Operating Equipment			✓	ProGator; backhoe, crane; radio

Physical Environment

The work takes place outdoors in a variety of climatic conditions.

Staffing Levels

The Cemetery Truck Driver II usually works alone (~90% of time). On occasion, the Cemetery Truck Driver II works in teams (~10% of time).

Tools and Equipment Used

The Cemetery Truck Driver II uses a variety of equipment and tools including a ProGator, a backhoe, lawn mower, weed eater, auger, crane, suction cup, cremation table, shovel, pitch fork (for lifting sods), long handle spade, grass rake, broom, pump, lowering device, walking board, pails and radio.

Other Equipment

CSA Approved boots are required. Other PPE equipment is available including gloves, high visibility safety jackets / vests, safety goggles, and hearing protection.

Data Collection

An ergonomics consultant from WorkWell Consulting (Ms. Farzana Ismail) conducted the JDA assessment on February 2nd 2009. One crew member was interviewed and observed performing the job.

Contact for the on-site assessment

Arnold McEwen was the management contact for the on-site assessment.

Description of Essential Duties

This section describes the work tasks that comprise the 4 essential duties of the job. Tables 1 - 4 (located at the end of this report) provide the physical, cognitive and psychosocial demands for performing each of the essential duties. Appendix A provides illustrations of the four essential duties.

Essential Duty 1: Cremation and Niche Wall (average 2 per day)

Duty 1 involves the following tasks:

- i) Removing plates using suction cup (Duty 1, Task 1).
- ii) Placing plate on the ground (Duty 1, Task 2).
- iii) Picking up urn off cremation table and placing in niche (Duty 1, Task 3).
- iv) Putting plate back on niche wall (Duty 1, Task 4).

Essential Duty 2: Setting and Removal of Markers

Majority (80%) of the markers used are small (12" x 20"). These markers are handled manually, i.e. lifted and carried by hand to and from the ground, vehicle and bench. The remaining 20% of the markers which are larger (16" x 28" or 18" x 30") are handled using a crane mounted on the ProGator. All markers are approximately 3.25 – 3.5" deep. The weights of the markers vary depending on the stone used.

Essential Duty 3: General Labouring

The Cemetery Truck Driver II also performs maintenance functions of the cemetery as required including the following:

- i) Mowing (Duty 3, Task 1).
- ii) Trimming (Duty 3, Task 2).
- iii) Hedge Maintenance (Duty 3, Task 3).
- iv) Landscaping (Duty 3, Task 4).
- v) Garbage removal (Duty 3, Task 5).
- vi) Creating flower container holes (Duty 3, Task 6). This task is performed twice per week.
- vii) Repairing sinkages, sinkers and low ground (Duty 3, Task 7). This involves removing the markers, cutting around the ground, removing sods (12" x 10" pieces), digging the hole down to make sure it's solid and then adding dirt.
- viii) Repairing stand pipes for irrigation (Duty 3, Task 8). The Cemetery Truck Driver II digs around the stand pipe. After an outside company has repaired the stand pipe, the Cemetery Truck Driver II puts the dirt and sods back.

- ix) Preparing an in-ground ash interment (Duty 3, Task 9). This task is performed 2-4 times per day. This involves digging a hole approximately 2 feet deep and carrying excess soil (in pails, on 34" x 42" board) to vehicle.

Essential Duty 4: Backhoe Operation (Spare Operator)

When operating the backhoe, the Cemetery Truck Driver II also performs the following tasks:

- i) Pumping water out of graves using pump (Duty 4, Task 1). This is a 2-person (backhoe and dump truck operators) task performed occasionally.
- ii) Setting up grave using lowering devices and walking boards (Duty 4, Task 2).
- iii) Hand-lowering caskets 6 – 9 feet below (Duty 4, Task 3). This is a 4-person task performed once every 5 days.

Table 1: Essential Duty 1 – Cremation and Niche Wall

a. Physical Demands		Frequency During Task						Weight		Comments
		Never	Rare	Infrequent	Occasional	Frequent	Constant	Usual (kg)	Max (kg)	
Strength	Lifting – Floor to Knuckle					✓		10	19	Plates (single - 10 kg, double - 19 kg, triple - 29 kg). Note: Triple plates are handled by 2 persons using 2 suction cups.
	Lifting – Knuckle to Waist					✓		10	19	Cremation table (~23 kg); plates (single - 10 kg, double - 19 kg, triple - 29 kg). Note: Triple plates are handled by 2 persons using 2 suction cups.
	Lifting – Over Shoulder				✓			10	19	Plates (single - 10 kg, double - 19 kg, triple - 29 kg). Note: Triple plates are handled by 2 persons using 2 suction cups.
	Carrying – with Handles				✓			2		Suction cup case (2 kg)
	Carrying – without Handles					✓		10	23	Urn (5-7 kg); cremation table (~23 kg); plates (single - 10 kg, double - 19 kg, triple - 29 kg). Note: Triple plates are handled by 2 persons using 2 suction cups.
	Pushing – Upper Extremity					✓				Pushing urn in niche wall
	Pushing – Hips/Legs assist	✓								
	Pulling – Upper Extremity					✓				Pulling plates out
	Pulling – Hip/Leg Assist	✓								
Mobility	Reach - Shoulder or Above				✓					
	Reach - Below Shoulder						✓			
	Handling						✓			
	Fine finger movements					✓				Finesse required when placing plates; controls on radio
	Neck - Static Flexion	✓								
	Neck – Static Neutral	✓								
	Neck – Static Extension	✓								
	Neck – Rotation						✓			
	Throwing	✓								
	Sitting				✓					Driving ProGator
	Standing					✓				
	Walking					✓				
	Running/Jumping	✓								
	Climbing	✓								
	Bending/Stooping					✓				

Job: Cemetery Truck Driver II
Employer: City of Vancouver

Department: Community Services
Location: Mountain View Cemetery

Union: CUPE Local 1004
Reports to: Cemetery Sub Foreman

Crouching					✓		While removing plates using suction cup
Kneeling				✓			
Crawling	✓						
Twisting				✓			Depends on work habits (if not turning feet)
Balancing	✓						
Travelling				✓			ProGator

Frequency Rating Definition for % of Task

The definitions for frequency ratings are contained at the end of the Table (page 13).

Table 1: Essential Duty 1 – Cremation and Niche Wall (continued)

a. Physical Demands (continued)		Frequency During Task						Comments
		N	R	I	O	F	C	
Sensory / Perception	Hear/Conversations					✓		Radio
	Hear/Other Sounds						✓	Driving ProGator
	Vision/Far						✓	Driving ProGator
	Vision/Near						✓	Driving ProGator
	Vision/Colour	✓						
	Vision/Depth						✓	Driving ProGator
	Perception/Spatial						✓	
	Perception/Form						✓	
	Feeling						✓	
	Speech					✓		Radio
Work Environment	Inside Work	✓						
	Outside Work						✓	
	Slippery						✓	Depends on weather
	Congested worksite	✓						
	Chemical Irritants	✓						
	Confined Space Entry	✓						
	Vapour Fumes	✓						
	Noise				✓			Proximity to loud equipment (backhoe, lawnmower, weed eater)
	Proximity to moving objects				✓			Backhoe, vehicles
	Hazardous Machines					✓		Crane
	Electrical hazard	✓						
	Hazardous objects	✓						
	Radiant/Thermal Energy	✓						
	Hot/Cold						✓	Constant during inclement weather
	Humid						✓	Constant during inclement weather
	Environmental Dust				✓			Dirt dust
	Organic Substances	✓						
	Medical Waste	✓						
	Blood Products	✓						
	Lighting – Direct						✓	Natural light outdoors
	Lighting – Indirect	✓						
	Vibration – Whole Body	✓						
	Vibration – Hand/Arm	✓						

Table 1: Essential Duty 1 – Cremation and Niche Wall (continued)

b. Cognitive and Psychosocial Demands	Frequency During Task			Comments
	Never / Rare	Infrequent / Occasional	Frequent / Constant	
Degree of Supervision	✓			
Time Pressure		✓		
Attention to Detail			✓	
Memory Requirements			✓	
Interact with co-workers		✓		
Interact with public		✓		
Work Alone			✓	
Reading		✓		Work orders
Writing		✓		Work orders
Irregular Hours	✓			
Operating Equipment			✓	ProGator; crane; radio

Frequency Rating Definitions for % of Task

The frequency rating definitions are from the Dictionary of Occupational Titles (DOT, 1991, 4th edition) published by the US Department of Labor.

	Percentage of Task
Never	0 %
Rare	0-1 %
Infrequent	2-5 %
Occasional	6-33 %
Frequent	34-66 %
Constant	67-100 %

STRENGTH	
Strength Category	Weight Handled
1. Limited	Up to 5 kg.
2. Light	5 kg. to 10 kg.
3. Medium	10 kg. to 20 kg.
4. Heavy	>20 kg

Table 2: Essential Duty 2 – Setting and Removal of Markers

a. Physical Demands		Frequency During Duty						Weight		Comments
		Never	Rare	Infrequent	Occasional	Frequent	Constant	Usual (kg)	Max (kg)	
Strength	Lifting – Floor to Knuckle					✓		27	32	Markers (12x20" - ~27-32 kg, wt. depends on stone); sods (~4-7 kg); shovel with soil (12 kg)
	Lifting – Knuckle to Waist					✓		27	32	Markers (12x20" - ~27-32 kg, wt. depends on stone); sods (~4-7 kg); shovel with soil (12 kg)
	Lifting – Over Shoulder	✓								
	Carrying – with Handles	✓								
	Carrying – without Handles					✓		27	32	Carry markers (12x20" - ~27-32 kg, weight depends on stone) to / from ground, vehicle and bench; sods (~4-7 kg)
	Pushing – Upper Extremity	✓								
	Pushing – Hips/Legs assist					✓				Shovelling
	Pulling – Upper Extremity	✓								
	Pulling – Hip/Leg Assist					✓				Shovelling
Mobility	Reach - Shoulder or Above	✓								
	Reach - Below Shoulder						✓			
	Handling						✓			
	Fine finger movements				✓					Controls on crane, ProGator
	Neck – Static Flexion			✓						
	Neck – Static Neutral			✓						
	Neck – Static Extension	✓								
	Neck – Rotation						✓			
	Throwing	✓								
	Sitting				✓					Driving ProGator
	Standing					✓				
	Walking					✓				Walking to find disc
	Running/Jumping	✓								
	Climbing	✓								
	Bending/Stooping					✓				
	Crouching				✓					
	Kneeling				✓					
	Crawling	✓								
	Twisting				✓					Depends on work habits (if not turning feet)
	Balancing	✓								
	Travelling				✓					ProGator

Frequency Rating Definition for % of Task

The definitions for frequency ratings are contained at the end of the Table (page 16).

Table 2: Essential Duty 2 – Setting and Removal of Markers (continued)

a. Physical Demands (continued)		Frequency During Duty						Comments
		N	R	I	O	F	C	
Sensory / Perception	Hear/Conversations					✓		Radio
	Hear/Other Sounds						✓	Driving ProGator
	Vision/Far						✓	Driving ProGator
	Vision/Near						✓	Driving ProGator
	Vision/Colour						✓	Colour of markers
	Vision/Depth						✓	Driving ProGator
	Perception/Spatial						✓	
	Perception/Form						✓	
	Feeling						✓	Needs to have firm grip on markers so they don't slip and fall
	Speech					✓		Radio
Work Environment	Inside Work	✓						
	Outside Work						✓	
	Slippery						✓	Depends on weather
	Congested worksite	✓						
	Chemical Irritants	✓						
	Confined Space Entry	✓						
	Vapour Fumes	✓						
	Noise				✓			Proximity to loud equipment (backhoe, lawnmower, weed eater)
	Proximity to moving objects				✓			Backhoe, vehicles
	Hazardous Machines					✓		Crane
	Electrical hazard	✓						
	Hazardous Objects	✓						
	Radiant/Thermal Energy	✓						
	Hot/Cold						✓	Constant during inclement weather
	Humid						✓	Constant during inclement weather
	Environmental Dust				✓			Dirt dust
	Organic Substances	✓						
	Medical Waste	✓						
	Blood Products	✓						
	Lighting – Direct						✓	Natural light outdoors
	Lighting – Indirect	✓						
	Vibration – Whole Body	✓						
	Vibration – Hand/Arm	✓						

Table 2: Essential Duty 2 – Setting and Removal of Markers (continued)

b. Cognitive and Psychosocial Demands	Frequency During Duty			Comments
	Never / Rare	Infrequent / Occasional	Frequent / Constant	
Degree of Supervision	✓			
Time Pressure		✓		
Attention to Detail			✓	
Memory Requirements			✓	
Interact with co-workers		✓		
Interact with public		✓		
Work Alone			✓	
Reading		✓		Work orders; cemetery maps
Writing		✓		Work orders
Irregular Hours	✓			
Operating Equipment			✓	ProGator; crane; radio

Frequency Rating Definitions for % of Duty

The frequency rating definitions are from the Dictionary of Occupational Titles (DOT, 1991, 4th edition) published by the US Department of Labor.

	Percentage of Duty
Never	0 %
Rare	0-1 %
Infrequent	2-5 %
Occasional	6-33 %
Frequent	34-66 %
Constant	67-100 %

STRENGTH	
Strength Category	Weight Handled
1. Limited	Up to 5 kg.
2. Light	5 kg. to 10 kg.
3. Medium	10 kg. to 20 kg.
4. Heavy	>20 kg

Table 3: Essential Duty 3 – General Labouring

a. Physical Demands		Frequency During Duty						Weight		Comments
		Never	Rare	Infrequent	Occasional	Frequent	Constant	Usual (kg)	Max (kg)	
Strength	Lifting – Floor to Knuckle				✓			4-7	32	Markers (12x20" - ~27-32 kg, weight depends on stone); sods (~4-7 kg); shovel with soil (12 kg); 34"x42" board with excess soil (~14-18 kg); auger (5 kg)
	Lifting – Knuckle to Waist				✓			4-7	12	Sods (~4-7 kg); shovel with soil (12 kg); 1-handed lifting of pails of excess soil (~18-23 kg)
	Lifting – Over Shoulder	✓								
	Carrying – with Handles				✓			16	23	Pails of water to wipe markers (~16 kg); 1-handed lifting of pails of excess soil (~18-23 kg); auger (5 kg)
	Carrying – without Handles				✓			4-7	18	Sods (~4-7 kg); 34"x42" board with excess soil (~14-18 kg)
	Pushing – Upper Extremity				✓					Shovelling (pushing sods up, adjusting markers; digging hole for in-ground ash interment)
	Pushing – Hips/Legs assist				✓					Shovelling (pushing sods up, adjusting markers; digging hole for in-ground ash interment); pushing down on auger into ground (to create flower container hole)
	Pulling – Upper Extremity				✓					Pulling up discs
	Pulling – Hip/Leg Assist				✓					Pulling up auger from ground
Mobility	Reach - Shoulder or Above				✓			Trimming trees		
	Reach - Below Shoulder						✓			
	Handling						✓	Tools (auger)		
	Fine finger movements				✓					
	Neck - Static Flexion				✓					
	Neck – Static Neutral	✓								
	Neck – Static Extension	✓								
	Neck – Rotation						✓			
	Throwing			✓				Salt		
	Sitting				✓			Driving ProGator		
	Standing					✓				
	Walking					✓				
	Running/Jumping	✓								
	Climbing	✓								

Bending/Stooping					✓		Using auger; lifting markers; digging hole, wiping dust off containers; lifting pails of excess soil
Crouching					✓		
Kneeling			✓				
Crawling	✓						
Twisting				✓			Depends on work habits (if not turning feet)
Balancing	✓						
Travelling				✓			ProGator

Frequency Rating Definition for % of Task

The definitions for frequency ratings are contained at the end of the Table (page 20).

Table 3: Essential Duty 3 – General Labouring (continued)

a. Physical Demands (continued)		Frequency During Task						Comments
		N	R	I	O	F	C	
Sensory / Perception	Hear/Conversations					✓		Radio
	Hear/Other Sounds						✓	Driving ProGator
	Vision/Far						✓	Driving ProGator
	Vision/Near						✓	Driving ProGator
	Vision/Colour						✓	Colour of markers
	Vision/Depth						✓	Driving ProGator
	Perception/Spatial						✓	
	Perception/Form						✓	
	Feeling						✓	
	Speech					✓		Radio
Work Environment	Inside Work	✓						
	Outside Work						✓	
	Slippery						✓	Depends on weather
	Congested worksite	✓						
	Chemical Irritants	✓						
	Confined Space Entry	✓						
	Vapour Fumes	✓						
	Noise				✓			Proximity to loud equipment (backhoe, lawnmower, weed eater)
	Proximity to moving objects				✓			Backhoe, vehicles
	Hazardous Machines					✓		Crane
	Electrical hazard	✓						
	Hazardous objects	✓						
	Radiant/Thermal Energy	✓						
	Hot/Cold						✓	Constant during inclement weather
	Humid						✓	Constant during inclement weather
	Environmental Dust				✓			Dirt dust
	Organic Substances	✓						
	Medical Waste	✓						
	Blood Products	✓						
	Lighting – Direct						✓	Natural light outdoors
	Lighting – Indirect	✓						
	Vibration – Whole Body	✓						
	Vibration – Hand/Arm	✓						

Table 3: Essential Duty 3 – General Labouring (continued)

b. Cognitive and Psychosocial Demands	Frequency During Task			Comments
	Never / Rare	Infrequent / Occasional	Frequent / Constant	
Degree of Supervision	✓			
Time Pressure		✓		
Attention to Detail			✓	
Memory Requirements			✓	
Interact with co-workers		✓		
Interact with public		✓		
Work Alone			✓	
Reading		✓		Work orders
Writing		✓		Work orders
Irregular Hours	✓			
Operating Equipment			✓	ProGator; crane; radio

Frequency Rating Definitions for % of Task

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	Percentage of Task
Never	0 %
Rare	0-1 %
Infrequent	2-5 %
Occasional	6-33 %
Frequent	34-66 %
Constant	67-100 %

STRENGTH	
Strength Category	Weight Handled
1. Limited	Up to 5 kg.
2. Light	5 kg. to 10 kg.
3. Medium	10 kg. to 20 kg.
4. Heavy	>20 kg

Table 4: Essential Duty 4 – Back Hoe Operation

a. Physical Demands		Frequency During Duty						Weight		Comments
		Never	Rare	Infrequent	Occasional	Frequent	Constant	Usual (kg)	Max (kg)	
Strength	Lifting – Floor to Knuckle				✓			28		Placing 4' x 8' boards (2-person lifting) on ground (~55 kg when wet); lowering device (multiple-person lifting ~64 kg); walking board (~27 kg)
	Lifting – Knuckle to Waist				✓			28		Placing 4' x 8' boards (2-person lifting) on backhoe (~55 kg when wet) ; lowering device (multiple-person lifting ~64 kg); walking board (~27 kg)
	Lifting – Over Shoulder	✓								
	Carrying – with Handles	✓								
	Carrying – without Handles				✓			28		4' x 8' boards (~55 kg when wet) - 2-person lifting; walking board (~27 kg)
	Pushing – Upper Extremity				✓					Removal of sods
	Pushing – Hips/Legs assist				✓			11		Removal of sods; push lowering device onto rack; push cart of walking boards - 11 kg
	Pulling – Upper Extremity	✓								
	Pulling – Hip/Leg Assist				✓			21		Pull lowering device off rack - 21 kg
Mobility	Reach - Shoulder or Above	✓								
	Reach - Below Shoulder						✓			
	Handling						✓			
	Fine finger movements						✓			Controls on backhoe
	Neck - Static Flexion				✓					Digging grave (1/2 hour)
	Neck – Static Neutral	✓								
	Neck – Static Extension	✓								
	Neck – Rotation						✓			
	Throwing	✓								
	Sitting					✓				Driving backhoe
	Standing				✓					
	Walking				✓					
	Running/Jumping	✓								
	Climbing				✓					Climbing in / out of backhoe (step hts. - 17", 14½", 8½")
	Bending/Stooping				✓					While removing sods; placing boards on ground
	Crouching			✓						

Job: Cemetery Truck Driver II
Employer: City of Vancouver

Department: Community Services
Location: Mountain View Cemetery

Union: CUPE Local 1004
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Kneeling		✓					
Crawling	✓						
Twisting			✓				Depends on work habits (if not turning feet)
Balancing				✓			On steps of backhoe
Travelling					✓		Backhoe

Frequency Rating Definition for % of Task

The definitions for frequency ratings are contained at the end of the Table (page 24).

Table 4: Essential Duty 4 – Back Hoe Operation (continued)

a. Physical Demands (continued)		Frequency During Task						Comments
		N	R	I	O	F	C	
Sensory / Perception	Hear/Conversations						✓	Radio; working with dump truck operator
	Hear/Other Sounds						✓	Driving backhoe
	Vision/Far						✓	Driving backhoe
	Vision/Near						✓	Driving backhoe
	Vision/Colour	✓						
	Vision/Depth						✓	Driving backhoe
	Perception/Spatial						✓	
	Perception/Form						✓	
	Feeling						✓	
	Speech						✓	Radio; working with dump truck operator
Work Environment	Inside Work	✓						
	Outside Work						✓	
	Slippery						✓	Depends on weather; steps
	Congested worksite	✓						
	Chemical Irritants	✓						
	Confined Space Entry	✓						
	Vapour Fumes	✓						
	Noise					✓		
	Proximity to moving objects				✓			Vehicles; dump truck
	Hazardous Machines	✓						
	Electrical hazard	✓						
	Hazardous objects	✓						
	Radiant/Thermal Energy	✓						
	Hot/Cold						✓	Constant during inclement weather
	Humid						✓	Constant during inclement weather
	Environmental Dust				✓			Dirt dust
	Organic Substances	✓						
	Medical Waste	✓						
	Blood Products	✓						
	Lighting – Direct						✓	Natural light outdoors
	Lighting – Indirect	✓						
	Vibration – Whole Body						✓	
	Vibration – Hand/Arm	✓						

Table 4: Essential Duty 4 – Back Hoe Operation (continued)

b. Cognitive and Psychosocial Demands	Frequency During Task			Comments
	Never / Rare	Infrequent / Occasional	Frequent / Constant	
Degree of Supervision	✓			
Time Pressure		✓		
Attention to Detail			✓	
Memory Requirements			✓	
Interact with co-workers		✓		
Interact with public		✓		
Work Alone			✓	
Reading		✓		Work orders; cemetery maps
Writing		✓		Work orders
Irregular Hours	✓			
Operating Equipment			✓	Backhoe; radio

Frequency Rating Definitions for % of Task

The frequency rating definitions are from the Dictionary of Occupational Titles (DOT, 1991, 4th edition) published by the US Department of Labor.

	Percentage of Task
Never	0 %
Rare	0-1 %
Infrequent	2-5 %
Occasional	6-33 %
Frequent	34-66 %
Constant	67-100 %

STRENGTH	
Strength Category	Weight Handled
5. Limited	Up to 5 kg.
6. Light	5 kg. to 10 kg.
7. Medium	10 kg. to 20 kg.
8. Heavy	>20 kg

Appendix A Essential Duty Illustrations

Essential Duty 1: Cremation and Niche Wall



Suction cap and case



Crouching to remove plate



Cremation table (~23 kg)

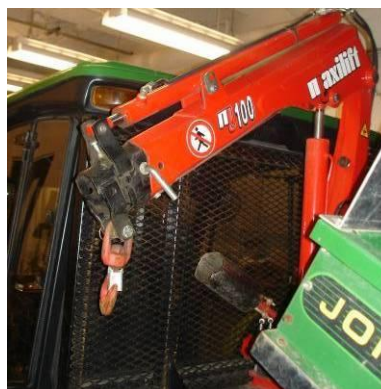


Urn

Essential Duty 2: Setting and Removal of Markers



ProGator



Crane on ProGator



Lifting marker with shovel



Carrying marker to vehicle



Carrying marker to bench

Essential Duty 3: General Labouring



Auger



Pushing down on auger



Flower container hole



Example of sinkage



Removing marker prior to repair



Lifting marker



Stand pipe



Digging hole around stand pipe



Removing sod



Preparing in-ground ash interment



Digging a 2-foot deep hole



Prepared in-ground ash interment



Wiping dust off container



Lifting pails of excess soil



Lifting board with excess soil

Essential Duty 4: Back Hoe Operation



Backhoe



Controls in backhoe cab



Pump for pumping water out of grave



Hose for pumping water



Lowering devices



Walking boards

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4' x 8' Boards to cover grave