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Physical Demands Analysis

Plumber

Prepared for:
 Alberta Construction Association

Job Title:	Plumber	Assessment Location:	Sylvan Lake, AB	Data Collection Date:	August 20, 2020
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Completed By:	Joanna Taets Von Amerongen	Submitted on:	October, 2020
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Disclaimer:	The Physical Demands noted in this report may vary depending on company and location. Please contact the company directly to confirm this physical demands analysis is an accurate representation of the specific job title for the specific location.
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Work Schedule:	<p>Shift Duration: 5 days/week, 8 hours/day; may vary depending on volume and weather</p> <p>Break Schedule: Total of 1 hour break per day / 2-15 minute breaks with 1-30 minute lunch break.</p> <p>Shift Rotation: Not applicable</p> <p>On call is required: No</p> <p>Overtime required: Yes; depending on volume and weather</p>
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Education / Experience:	<p>Education required: 4 year apprenticeship program specializing in plumbing.</p> <p>Hours required for position: Approximately 4,000 hours (1,000 hours/year).</p> <p>Tickets that may be required (not limited to): Confined Space, First Aid, WHMIS and Basic Safety Orientation (BSO).</p>
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Labour Provider:	N/A
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Job Overview:	As a Plumber the worker is required to prepare, install and complete any necessary repairs on all residential plumbing including rough in's.		
	% of shift	Job Task	Task Description
	6-12%	Loading materials at shop	<ul style="list-style-type: none"> Retrieving all required materials, tools and equipment at the shop for the site and the shift onto work truck.
	Up to 12%	Driving to site and unloading	<ul style="list-style-type: none"> Driving to the site for the shift in and surrounding areas using work truck. Unloading all required materials, tools and equipment on site.
	54-64%	Plumbing	<ul style="list-style-type: none"> Completing planned tasks for the shift including completing rough in's and repairs as required.
6-10%	Clean up and loading	<ul style="list-style-type: none"> Completing site clean up including loading all required materials, tools and equipment from site onto work truck. 	



		materials from site	
	Up to 12%	Driving to shop to unload materials	<ul style="list-style-type: none"> Driving to the shop to unload all materials, tools and equipment with a work truck.

Equipment/ Tools:	<ul style="list-style-type: none"> Drills - Sozo (up to 3 lbs.) Chop saw (27 lbs.) Shovel (2 lbs. empty, 14 lbs. full with rock) Haul Hawg (14 lbs.) Glue (4 lbs.) Various hand tools (trapping, snip, etc.) Ladder (20 lbs.) Pex pipe roller (up to 40 lbs.) Exacto knife Bucket of tools (20 lbs.) Box of PVC fitting and ABS peetrap (40 lbs.)
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Exposures / Environment:	<ul style="list-style-type: none"> Heat Wind Cold Glue fumes (PVC cleaner and glue)
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Personal Protective Equipment Required:	<ul style="list-style-type: none"> Hard hat Steel toed boots Gloves Safety glasses Safety vest or high visibility stripes 6 inch sleeves and long pants
Personal Protective Equipment as Required:	

NOC STRENGTH LEVEL KEY	
Strength Level	Definition
Limited (Lim)	Up to 5 kg (11 pounds)
Light (L)	5 kg to 10 kg (11 – 22 pounds)
Medium (M)	10 kg to 20 kg (22 – 44 pounds)
Heavy (H)	Greater than 20 kg (44 pounds plus)

**Strength Level Key based on the National Occupational Classification*

FREQUENCY KEY		
Frequency	% of Workday	Hours – Based on 8 hour Workday
Not Required (N/R)	0%	0
Rarely (R)	1 – 5%	<25 min/day
Occasionally (O)	6 – 33%	25 min to 2 hours 40 min/day
Frequently (F)	34 – 66%	2 hours 41 min to 5 hours 17 min/day
Constantly (C)	67 – 100%	5 hours 18 min to 8 hours/day

**Frequency Key based on WCB Alberta Recommendations*

Job Demand	Frequency / NOC Strength Level					Details/ Measurements
	N/R	R	O	F	C	
Material Handling:						
Floor to Waist Level Lifting			M	L		Lifting drills (up to 3 lbs.), tools (up to 27 lbs.), boxes of pipes (40 lbs.), ABS and PVC pipes (up to 40 lbs.), chop saw (27 lbs.), glue (4 lbs.), hand tools, various supplies, shovel (14 lbs. full), bucket of tools (20 lbs.), etc.
Knee to Waist Level Lifting			M	L		Lifting from elevated levels in the house: drills (up to 3 lbs.), tools (up to 27 lbs.), boxes of pipes (40 lbs.), ABS and PVC pipes (up to 40 lbs.), chop saw (27 lbs.), glue (4 lbs.), hand tools, various supplies, shovel (14 lbs. full), bucket of tools (20 lbs.), etc.
Waist to Waist Level Lifting			M	L		Lifting into truck bed, table in house including drills (up to 3 lbs.), tools (up to 27 lbs.), boxes of pipes (40 lbs.), ABS and PVC pipes (up to 40 lbs.), chop saw (27 lbs.), glue (4 lbs.), hand tools, various supplies, bucket of tools (20 lbs.), etc.
Waist to Chest Level Lifting		M				Lifting ABS and PVC pipes (up to 40 lbs.) onto framework.
Waist to Shoulder Level Lifting		M				Lifting ABS and PVC pipes (up to 40 lbs.) onto framework, marking in house, drilling.
Waist to Overhead Level Lifting			M	L		Placing pipes (up to 40 lbs.) into framework, drilling, using haul hawg (14 lbs.) onto higher level framework, marking in house.
Front Carry		M				Carrying box of ABS and PVC pipes (up to 40 lbs.) onto site.
Right / Left-handed Carry (Dominant Hand)			M			Carrying ABS and PVC pipes (up to 40 lbs.), box of tools (up to 20 lbs.), drills (up to 4 lbs.), chop saw (27 lbs.), hand tools, ladder (20 lbs.), etc.
Shoulder Carry	X					Not required.

Static Pushing/Pulling (Force)			Light NOC Level			Using exacto knife throughout house.
Dynamic Pushing/Pulling (Force)			Heavy NOC Level	Light NOC Level		Pushing a tub/shower (up to 159.5 lbs.) to access pipe placement, using hawg to place external and internal pipe placement, pushing/pulling pipe through inserts, pushing outside tap attachment, pushing pipe through chop saw, shovelling in the basement of the residence.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Upper Extremity Work:						
Hand Gripping					X	Using hand tools, chop saw, haul haw, various hand tools, placing bits on hawg, preparing and installing ABS and PVC pipes, during site clean up, loading and unloading on site, moving tub/shower to access pipe placement, etc.
Pinch Gripping				X		Using nails, bits and screws, placing glue onto piping, during tracing and marking, using exacto knife, tracing holes for tap placement, etc.
Upper Extremity Coordination					X	Using hand tools, chop saw, haul haw, various hand tools, placing bits on hawg, preparing and installing ABS and PVC pipes, during site clean up, loading and unloading on site, moving tub/shower to access pipe placement, etc.
Reaching Forward					X	During tracing and marking, while using chop saw and haul hawg, various hand tools, accessing various parts of the house to place pipe, during site clean up, loading and unloading on site, preparing and installing ABS and PVC pipes.
Overhead Shoulder Level Reaching				X		Completing measurements, tracing and marking throughout site, using haul hawg in ceiling beams, placing pipes throughout site.
Below Shoulder Level Reaching					X	During tracing and marking, while using chop saw and haul hawg, various hand tools, accessing various parts of the house to place pipe, during site clean up, loading and unloading on site, preparing and installing ABS and PVC pipes.
Throwing			X			During site clean up and throughout the shift to place wooden cut outs into garbage.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Positional Work:						
Trunk Flexion (Bending)				X		Placing tap attachments in exterior of house, during measuring, tracing and installing, working on lower level piping, shovelling in basement, working on floor beam.
Trunk Rotation (Twisting)			X			When accessing confined spaces, shovelling in basement, installing and checking pipe.
Kneeling			X			To place tap attachments in exterior, access lower level areas of the site, measuring and tracing.
Crawling		X				In crawl spaces (dependent on site).
Crouching			X			To place tap attachments in exterior, access lower level areas of the site, measuring and tracing.
Squatting			X			To place tap attachments in exterior, access lower level areas of the site, measuring and tracing.
Neck Flexion					X	Tracing and measuring, installing pipes and tap attachments, retrieving materials and tools/equipment, during site clean up, loading and unloading materials/tools/equipment, checking surroundings on site.
Neck Extension				X		Tracing, measuring and installing pipes in higher level areas on site, while using haul hawg in higher levels, checking surroundings.
Neck Rotation				X		Communicating with coworkers, checking pipe placement, confined spaces, tracing, measuring and installing pipes.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Static Work:						
Sitting			X			Driving to and from site, during breaks.
Static Standing				X		Tracing, measuring and installing pipes, using haul hawg and chop saw, etc.
Balancing				X		Throughout site, using ladder and placing pipe, unfinished basements.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Ambulation:						



Walking: Level Surfaces				X		Throughout site, while placing pipes in main and upper floor of site, etc.
Walking: Uneven Surfaces			X			In unfinished basement, exterior of site, loading and unloading materials/tools/equipment.
Walking: Slopes			X			Exterior of site.
Jumping	X					Not required.
Running	X					Not required.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Climbing:						
Stairs			X			Interior of site, to access the property.
Ladder				X		During tracing, measuring and installing ABS and PVC pipes, to access higher levels on site.
Other		X				Accessing unfinished site (deck) to load and unload materials/equipment/tools.

PHOTOS OF TASKS AND WORK ENVIRONMENT

Figure 1: Measuring and installing plumbing to site exterior.



Figure 2: Carrying tools and materials to the second floor of the site.



Figure 3: Using haul hawg for pipe installation.

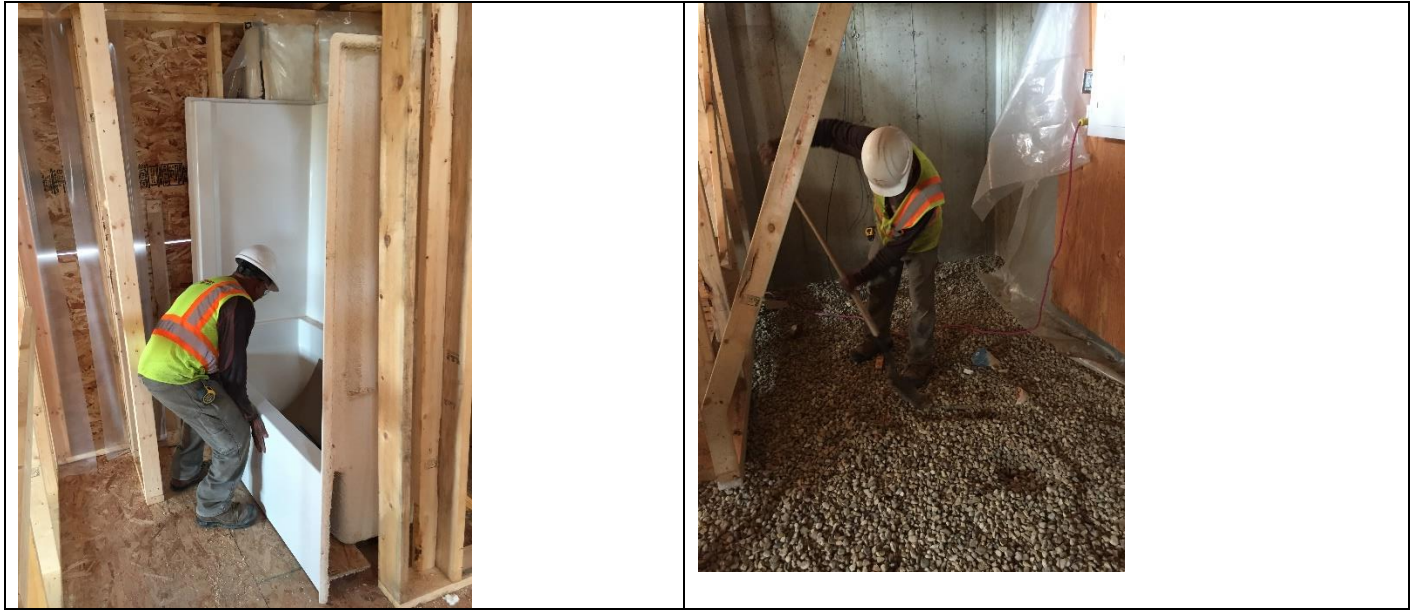


Figure 4: Installing pipe into the second floor of site.



Figure 5: Pushing tub/shower to access site for pipe installation.

Figure 6: Shovelling in basement of site.



If you have any questions, and/or would like to discuss this assessment and report further, I can be reached at (780) 429-4761.

Sincerely,

Joanna Taets Von Amerongen, BKin
Kinesiologist



SITE SPECIFIC JOB DEMAND ADDITIONS:

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Site Specific Job Demand:						
Vibration				X		Using haul hawg, cop saw, drills.



Validation Agreement

Job Title:	Plumber
Data Collection Date:	August 20, 2020

We the undersigned have reviewed the Physical Demands Analysis for this position and agree that the physical demands documented in this report are representative of the true demands of the tasks associated with the job title as assessed on the date listed above.

Completed by:	Joanna Taets Von Amerongen, BKin	Lifemark Clinician Name
Approved by:	Herman Bruin	Management Representative
Approved by:		Worker Representative
Approved by:		Labour Provider Representative