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## Physical Demands Analysis

### Commercial Carpenter – Foreman/Supervisor/Superintendent

Prepared for:  
 Alberta Construction Association

<b>Job Title:</b>	Commercial Carpenter – Foreman/Supervisor/Superintendent	<b>Assessment Location:</b>	Edmonton, AB	<b>Data Collection Date:</b>	September 23, 2020
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<b>Completed By:</b>	Joanna Ellingson, BKin	<b>Submitted on:</b>	April 6, 2021
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<b>Disclaimer:</b>	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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<b>Work Schedule:</b>	<p><b>Shift Duration:</b> 5 days/week, 10-11 hours/day</p> <p><b>Break Schedule:</b> Total of 1 hour break per day / 2-15 minute coffee breaks, 1-30 minute lunch break</p> <p><b>Shift Rotation:</b> Dependent on job; days vs. nights</p> <p><b>On call is required:</b> No / Yes – 24 hours per day for site security; 1 week on, 3 weeks off</p> <p><b>Overtime required:</b> Yes; dependent on superintendent scheduling and project progress.</p>
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<b>Education / Experience:</b>	<p><b>Education required:</b> Supervisory mentorship and training, leadership courses provided. A Journeyman Carpenter has participated in a 4 year program including 8 weeks of in school training and 1,560 hours of on the job training per year.</p> <p><b>Hours required for position:</b> A minimum of 6,240 hours of on the job training is completed during the Apprenticeship Carpenter program.</p> <p><b>Tickets that may be required (not limited to):</b> Fall protection, Ground Disturbance, Elevated Work Platform (EWP), First Aid, WHMIS, Construction Safety Training Systems (CSTS) and Basic Safety Orientation (BSO).</p>
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<b>Labour Provider:</b>	N/A
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<b>Job Overview:</b>	As a Finishing Carpenter and Foreman/Supervisor/Superintendent, the worker is required to lead the Carpenters on site, complete office and paperwork as required and participate in on site carpentry work as required.		
	% of shift	Job Task	Task Description
	Up to 20%	Office planning	<ul style="list-style-type: none"> <li>Look at the tasks and projects required for the site, the progress of the site thus far and create plans for the Carpenters to complete moving forward.</li> <li>Direct employees for hazards and accessing/coordinating changes for the week as required.</li> </ul>

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			<ul style="list-style-type: none"> <li>• Changes made to project blue prints as needed.</li> <li>• Scheduling for his team and coordinating with other trades.</li> </ul>
	2%	Tailgate talk	<ul style="list-style-type: none"> <li>• Providing the Carpenters’ plans for the day including progress on site thus far and from previous day, plan for remaining projects required and updates on any changes required for remaining projects.</li> <li>• Discuss any safety concerns/hazards and updates related to the day’s work.</li> <li>• Hazard assessment discussion and where Carpenters will be working for the day.</li> </ul>
	Up to 8%	Sub trade meeting	<ul style="list-style-type: none"> <li>• Provide update to coordinating trades on site regarding progress, delays and any updates that will affect the project timelines.</li> <li>• Can be completed through a formal meeting or throughout site.</li> </ul>
	Up to 20%	Assisting team when needed	<ul style="list-style-type: none"> <li>• Completing carpentry work when the team is behind, one of the crew members is not there or the team requires further assistance/expertise.</li> <li>• Operating skid steer, forklift, mini excavator, scissor/boom lift as needed.</li> </ul>
	Up to 20%	Various meetings	<ul style="list-style-type: none"> <li>• Dependent on the day, required to provide updates and problem solve as needed.</li> </ul>
	Up to 10%	Ordering materials	<ul style="list-style-type: none"> <li>• Ordering materials required to complete the Carpenters’ tasks and ensure the project timelines are being met efficiently.</li> </ul>
	Up to 20%	Quality control	<ul style="list-style-type: none"> <li>• Reviewing site and tasks completed thus far to ensure the work matches plans/blue prints and quality meets Clark Builder’s standards.</li> </ul>

<b>Equipment/Tools:</b>	<ul style="list-style-type: none"> <li>• Skid steer</li> <li>• Alternating forklift</li> <li>• Mini excavator</li> <li>• Scissor/Boom lift</li> <li>• IPad</li> <li>• Cell phone</li> <li>• Jack hammer</li> <li>• Tape measure</li> <li>• Level (builders, laser)</li> <li>• Chalk lines</li> <li>• Chop saw (27 lbs.)</li> <li>• Table saw</li> <li>• Circular saw (13 lbs.)</li> <li>• Dustless concrete grinder (37 lbs.)</li> </ul>
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	<ul style="list-style-type: none"><li>• Hand held drills (4 lbs.)</li><li>• Hammer drills (10 lbs.)</li><li>• Hammer</li><li>• Level</li><li>• Scissor lift</li><li>• Grinder (5 lbs.)</li><li>• Nail gun (3 lbs.) and case (13 lbs.)</li><li>• Extension cords (up to 15 lbs.)</li><li>• Tool belt (21 lbs.)</li><li>• Ladders</li><li>• Caulking guns</li><li>• Shovel (6 lbs.)</li><li>• Sledge hammer (10 lbs.)</li><li>• Leaf blower</li><li>• Concrete sealer (15 lbs. empty)</li><li>• 3 ¼ Plywood sheets – 4 x 8 sheets (up to 66 lbs.)</li><li>• Pen/pencil</li><li>• Utility knife</li><li>• Tape measure</li><li>• Pliers</li><li>• Cat’s paw (~1 lbs.)</li><li>• Wrench</li><li>• Flat bar (~1 lbs.)</li><li>• Flush cutter</li><li>• Concrete</li></ul>
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<b>Exposures / Environment:</b>	<ul style="list-style-type: none"><li>• Noise exposure</li><li>• Vibration exposure</li><li>• Dim lighting</li><li>• Dust (concrete/wood) exposure</li><li>• Heat/Cold weather extremes</li><li>• Wind</li><li>• Icy/slippery surfaces</li><li>• Tripping hazards</li><li>• Working at heights</li><li>• Chemical fumes (caulking gun)</li><li>• Glue/adhesive fumes</li></ul>
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<b>Personal Protective Equipment Required:</b>	<ul style="list-style-type: none"><li>• Hard hat</li><li>• Steel toed boots</li><li>• Gloves</li><li>• CSA safety glasses</li></ul>
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	<ul style="list-style-type: none"> <li>• Safety vest or high visibility stripes</li> <li>• Long pants</li> <li>• Kneeling pads</li> </ul>
<b>Personal Protective Equipment as Required:</b>	<ul style="list-style-type: none"> <li>• Fall arrest protection</li> <li>• Hearing protection</li> <li>• Head lamps</li> <li>• Dust masks</li> <li>• Splash goggles (concrete dust)</li> </ul>

NOC STRENGTH LEVEL KEY	
Strength Level	Definition
<b>Limited (Lim)</b>	Up to 5 kg (11 pounds)
<b>Light (L)</b>	5 kg to 10 kg (11 – 22 pounds)
<b>Medium (M)</b>	10 kg to 20 kg (22 – 44 pounds)
<b>Heavy (H)</b>	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
<b>Not Required (N/R)</b>	0%	0
<b>Rarely (R)</b>	1 – 5%	<25 min/day
<b>Occasionally (O)</b>	6 – 33%	25 min to 2 hours 40 min/day
<b>Frequently (F)</b>	34 – 66%	2 hours 41 min to 5 hours 17 min/day
<b>Constantly (C)</b>	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	
<b>Material Handling:</b>						
<b>Floor to Waist Level Lifting</b>		H				Lifting plywood (66 lbs.) and materials from floor onto workstation table, lifting various tools and equipment during set up and clean up, throughout site as required, lifting grinders (5 lbs.), chop saw (27 lbs.), circular saw (13 lbs.), nail gun and case (3/13 lbs.), etc. throughout shift during cutting, grinding, assembly, installation and demolition phases.



<b>Knee to Waist Level Lifting</b>		H				Lifting plywood (66 lbs.) and materials onto workstation table, lifting various tools and equipment during set up and clean up, throughout site as required, lifting grinders (5 lbs.), chop saw (27 lbs.), circular saw (13 lbs.), nail gun and case (3/13 lbs.), etc. throughout shift during cutting, grinding, assembly, installation and demolition phases.
<b>Waist to Waist Level Lifting</b>		H				Lifting plywood (66 lbs.) and materials from truck to cart/workstation table, lifting various tools and equipment during set up and clean up, throughout site as required, lifting grinders (5 lbs.), chop saw (27 lbs.), circular saw (13 lbs.), nail gun and case (3/13 lbs.), etc. throughout shift during cutting, grinding, assembly, installation and demolition phases.
<b>Waist to Chest Level Lifting</b>		H				Lifting plywood (66 lbs.) during installation/demolition phases, lifting various tools and equipment during set up and clean up, throughout site as required, lifting grinders (5 lbs.), various saws, nail gun and case (3/13 lbs.), etc. throughout shift during cutting, grinding, assembly, installation and demolition phases at higher levels.
<b>Waist to Shoulder Level Lifting</b>		H				Lifting plywood (66 lbs.) during installation/demolition phases, lifting various tools and equipment during set up and clean up, throughout site as required, lifting grinders (5 lbs.), various saws, nail gun and case (3/13 lbs.), etc. throughout shift during cutting, grinding, assembly, installation and demolition phases at higher levels.
<b>Waist to Overhead Level Lifting</b>		H				Lifting plywood (66 lbs.) during installation/demolition phases, lifting various tools and equipment during set up and clean up, throughout site as required, lifting grinders (5 lbs.), various saws, nail gun and case (3/13 lbs.), etc. throughout shift during cutting, grinding, assembly, installation and demolition phases at higher levels.
<b>Front Carry</b>		H				Carrying plywood (66 lbs.), various materials and tools/equipment during set up and clean up, throughout site as required during all phases.

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<b>Right / Left-handed Carry (Dominant Hand)</b>		H				Carrying various materials, tools and equipment including circular saw (13 lbs.), extension cords (up to 15 lbs.), grinders (5 lbs.), nail gun and case (13 lbs.) during set up and clean up, various phases (assembly, installation, demolition), carrying iPad around site.
<b>Shoulder Carry</b>		H				Carrying 2 x 4 studs, extension cords (up to 15 lbs.), etc.
<b>Static Pushing/Pulling (Force)</b>		H				Sheeting a wall, form work aligning, etc.
<b>Dynamic Pushing/Pulling (Force)</b>		H				Pushing workstation table (43 lbs. of force), pushing vacuum, pushing plywood on cart (33 lbs.), pushing various materials through table saw (55 lbs. of force), pushing various equipment to cut/assemble/install materials (grinder, various saws, etc.), pushing hammer, flat bar and other hand tools, pushing wheelbarrow, pallet jacks. Shovelling snow/dirt/etc. in order to maintain site quality.

\*It is recommended that anything greater than 50 lbs., the worker use assistive equipment or use a 2 person lifting method.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
<b>Upper Extremity Work:</b>						
<b>Hand Gripping</b>				X		Gripping power/hand tools, during material handling tasks (listed above), during cutting, grinding, assembly, installation and demolition phases, gripping iPad and cell phone as required, using computer/cell phone to order materials.
<b>Pinch Gripping</b>				X		When completing backing tasks, using pen/pencil while completing measurements and adjusting blue prints, scheduling, various paperwork, picking up or using drill bits and nails, etc.
<b>Upper Extremity Coordination</b>					X	Using power/hand tools, during material handling tasks (listed above), during cutting, grinding, assembly, installation and demolition phases. Using iPad and cell phone throughout the day, completing various paperwork, using computer/cell phone to order materials.



<b>Reaching Forward</b>				X		Using table and circular saw, during assembly and installation tasks, retrieving materials including plywood, etc.. Using Ipad and cell phone throughout the day, completing various paperwork.
<b>Overhead Shoulder Level Reaching</b>		X				Reaching to place plywood down on floor/cart, setting up/cleaning higher levels of work station on site, working at/above shoulder height on ladders/scaffoldings during installation and demolition, etc.
<b>Below Shoulder Level Reaching</b>					X	Using power/hand tools at workstation or during installation and demolition, setting up/cleaning lower levels of work station on site, working below shoulder during cutting, grinding, assembly, installation and demolition tasks. Using Ipad and cell phone throughout the day, completing various paperwork.
<b>Throwing</b>		X				Throwing rope when hoisting.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
<b>Positional Work:</b>						
<b>Trunk Flexion (Bending)</b>			X			Using equipment and tools (circular saw, hammer, level) on lower level surfaces, working on below waist levels, framing wall, during installation and demolition phases, set up and clean up as required, operating equipment, reviewing blue prints, during quality control reviews around site.
<b>Trunk Rotation (Twisting)</b>			X			During assembly, installation and demolition phases, working in awkward and confined spaces, set up and clean up as required, during quality control reviews around site.
<b>Kneeling</b>			X			Working on lower level work spaces during installation and demolition as required, installing lumber, working in awkward and confined spaces, during quality control reviews around site.
<b>Crawling</b>		X				Working on lower level work spaces during installation and demolition as required, installing lumber, working in awkward and confined spaces, during quality control reviews around site.



<b>Crouching</b>			X			Working on lower level work spaces during installation and demolition as required, installing lumber, working in awkward and confined spaces, during quality control reviews around site.
<b>Squatting</b>			X			Working on lower level work spaces during installation and demolition as required, working in awkward spaces, during quality control reviews around site.
<b>Neck Flexion</b>				X		During cutting, grinding, assembly, installation and demolition phases, completing measurements, during set up and clean up, checking surroundings at work site, etc. Completing office planning, paperwork, using iPad and cell phone, operating equipment, during quality control reviews around site.
<b>Neck Extension</b>				X		During assembly, installation and demolition phases at higher levels, completing measurements at higher levels, during set up and clean up, checking surroundings at work site, etc. Operating equipment and during quality control reviews around site.
<b>Neck Rotation</b>				X		During cutting, grinding, assembly, installation and demolition phases, completing measurements, during set up and clean up, checking surroundings at work site, etc. Completing office planning, paperwork, using iPad and cell phone, operating equipment, during quality control reviews around site.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
<b>Static Work:</b>						
<b>Sitting</b>			X			During breaks and meetings, working on ground level areas. Completing office planning, ordering materials and paperwork as required.
<b>Static Standing</b>				X		While using equipment and tools, during cutting, grinding, assembly, installation and demolition phases, during task/site planning, various meetings throughout the day, completing quality control around site.





<b>Balancing</b>					X	Throughout site (indoors/outdoors) and while using ladders, entering and exiting equipment, during quality control around site.
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Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
<b>Ambulation:</b>						
<b>Walking: Level Surfaces</b>				X		Walking throughout site (indoors/outdoors); frequency depending on progress of site (beginning vs. finishing stages). During quality control around site.
<b>Walking: Uneven Surfaces</b>			X			Walking throughout site (indoors/outdoors); frequency depending on progress of site (beginning vs. finishing stages). During quality control around site.
<b>Walking: Slopes</b>		X				Dependent on site (outdoors). During quality control around site.
<b>Jumping</b>	X					Not required.
<b>Running</b>	X					Not required.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
<b>Climbing:</b>						
<b>Stairs</b>			X			Throughout site to access various levels, while assisting crew members, during quality control.
<b>Ladder</b>			X			While working on higher level areas including ceiling and roof work, during quality control.
<b>Other</b>			X			Accessing scissor/boom lift, mini excavator, forklift, , climbing garbage bins to dispose of garbage, scaffolds, etc.

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,

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Joanna Ellingson, BKin  
 Kinesiologist



**SITE SPECIFIC JOB DEMAND ADDITIONS:**

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
<b>Site Specific Job Demand:</b>						
<b>Vibration</b>			X			While using power/hand tools during cutting, grinding, assembly, installation and demolition phases. Operating various equipment on site including scissor/boom lift, forklift, mini excavator, skid steer, etc.
<b>Writing</b>				X		During measurements and completing Daily Pre-Task Hazard Analysis. Completing office planning and paperwork, making revisions to blue prints, etc.



### Validation Agreement

<b>Job Title:</b>	Commercial Carpenter – Foreman/Supervisor/Superintendent
<b>Data Collection Date:</b>	September 23, 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.

<b>Completed by:</b>	Joanna Ellingson, BKin	Lifemark Clinician Name and Credentials
<b>Approved by:</b>		Management Representative
<b>Approved by:</b>		Worker Representative
<b>Approved by:</b>		Labour Provider Representative