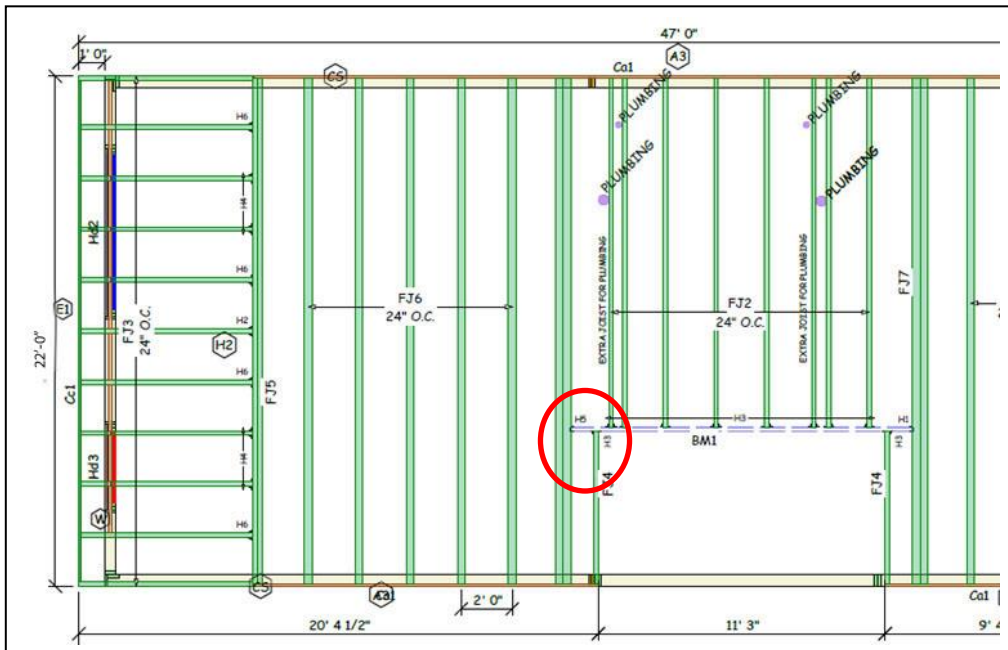


Commentary-Dave Pasolli-Western Wood Truss Association of Alberta

I am going to try something different this month and address a common technical issue with floor framing based on a suggestion I received from a member.

**Reactions at Trimmer Joists Supporting Stairwell Headers**

It is typical for I-joists and floor trusses to have greater spans than the building code was designed for. This leads to the potential of creating greater accumulated point loads that must be accounted for.



In the above floor the reaction at the hanger for the header would be about 3,300 lbs. that has to be supported by the double trimmer joist.

Because builders like to use double trimmer joists so that they can get their ducts through, the connection of the double at the hanger location needs to be looked at. Not only the capacity of the hanger must be considered but the connection of the double joist itself, this may be overlooked in the design.

A quick look at the APA Technical Notes for stairwell openings notes that the maximum capacity for this detail is 1280 lbs. (WSD) I am sure that this is related to the number of nails.

Each manufacturer may have a different capacity based on their own testing or engineering that should be referred to. I have seen one manufacturer have a limit up to 2,940 lbs. with 32 nails into the filler block and 15 into the backer block. The number of nails could also be a factor of the joist depth.

**Backer Block Construction**  
Size backer blocks in accordance with Figure B2.

**FIGURE B2  
BACKER BLOCK INSTALLATION DETAILS**

**Backer block (use if hanger load exceeds 250 lbs.)**  
Before installing a backer block to a double I-joist, drive 3 additional 10d (0.148" x 3") nails through the webs and filler block where the backer block will fit. Clinch. Install backer tight to top flange. Use twelve 10d (0.148" x 3") nails, clinched when possible. Maximum capacity for hanger for this detail = 1280 lbs.

**BACKER BLOCKS** (Blocks must be long enough to permit required nailing without splitting)

Flange Width	Material Thickness Required <sup>(a)</sup>	Minimum Depth <sup>(b)</sup>
1-1/2"	19/32"	5-1/2"
1-3/4"	23/32"	5-1/2"
2-5/16"	1"	7-1/4"
2-1/2"	1"	5-1/2"
3-1/2"	1-1/2"	7-1/4"

Top- or face-mounted hanger

Double I-joist header

Note: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

Filler block per Figure 1  
APA Builder Tips – I-Joist Filler Blocks, Form A760.

Backer block required (both sides for face-mounted hangers)

For hanger capacity see hanger manufacturer's recommendations. Verify double I-joist capacity to support concentrated loads.

(a) Minimum grade for backer block material shall be Utility grade SPF (south) or better for solid sawn lumber and Rated Sheathing grade for wood structural panels.  
(b) For face-mount hangers use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges. For 1-5/16" thick flanges use net depth minus 2-7/8".

Taken from APA Stairwell Openings Technical Note

I am not sure how all design programs take this situation into account or if they have a limit on the connection based on the connection of the double joist. The software may just look at the load and refer to a manufacturer's detail.

Of course, the design could incorporate a solid structural composite beam for the trimmer, but that may create other issues with duct access and of course cost.

This situation should also be considered when designing open web floor trusses, although you have more options to support the header beam.

It is important that as an industry we ensure that these types of details are properly looked at. Not properly addressing the details leads to Authorities Having Jurisdiction questioning designs eventually leading to the request for professional involvement in design.

If you have any other technical issues that you would like to see in the newsletter, just drop me an email. [dave@wwta.ab.ca](mailto:dave@wwta.ab.ca)

## Economic Update

In Alberta, urban housing starts totaled 4108 in September 2023, a year-over-year increase of 20%. Canadian housing starts decreased by 7.9% over the same period. Edmonton was down 26% compared to last September, and Calgary was up by 63%. Total starts in Alberta were up from 3337 in the previous month of August.

Housing Starts Alberta						
	Sep-23	Sep-22	% Change	YTD 2023	YTD 2022	% Change
Alberta	4108	3423	20.01%	24905	26797	-7.06%
Edmonton	1084	1460	-25.75%	9099	11142	-18.34%
Calgary	2734	1679	62.84%	14141	12865	9.92%
Red Deer	23	11	109.09%	146	111	31.53%
Grande Prairie	11	21	-47.62%	74	169	-56.21%
Lethbridge	32	22	45.45%	148	714	-79.27%
Wood Buffalo	0	7	-100.00%	21	100	-79.00%
Whitehorse*	105	67	56.72%	211	239	-11.72%
<b>Canada</b>	<b>22184</b>	<b>24097</b>	<b>-7.94%</b>	<b>165243</b>	<b>179578</b>	<b>-7.98%</b>

\*Whitehorse Starts are for the quarter, statistics are not available monthly.

### Housing Starts by Dwelling Type (Centres 10K+)

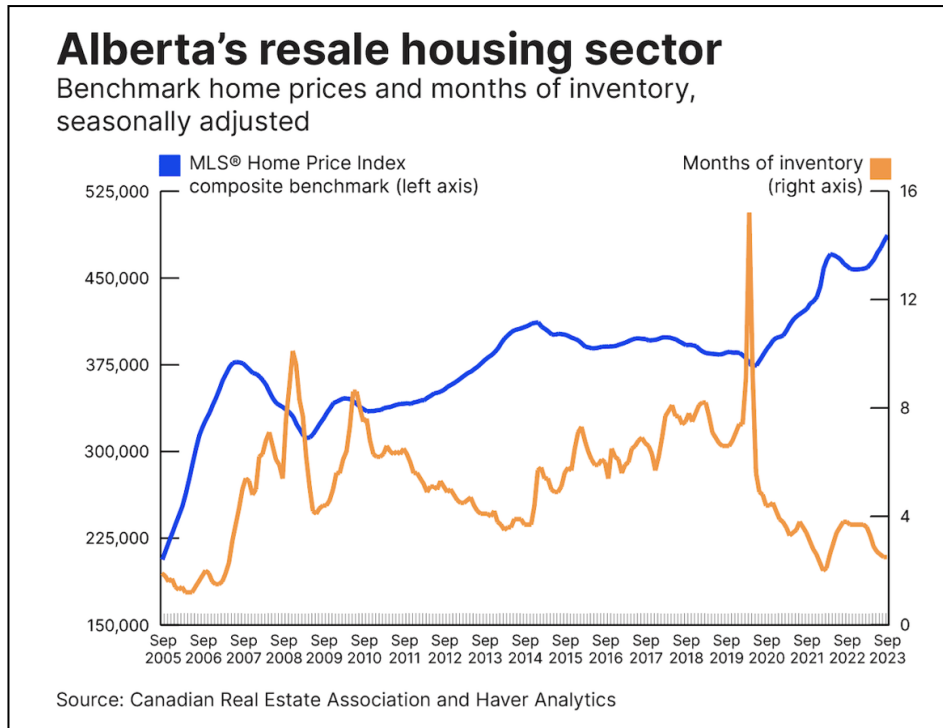
	SEP-23	SEP-22	YTD-23	YTD-22
Total	4,108	3,423	24,905	26,797
Single	1,185	1,461	8,578	11,037
Semi-detached	251	306	2,048	2,117
Row	500	502	3,911	3,330
Apartment	2,172	1,154	10,368	10,313

### Much needed boost in home construction -ATB

Residential construction has struggled to keep pace with record migration this year amid rising interest rates, higher costs and labour shortages. In [last week's Wrap](#), we pointed to tentative signs of a turnaround in the summer. [New September data](#) reinforces this trend: housing starts hit an 8-year high of 49,000 (annualized, seasonally adjusted) in September, driven by multi-units. While this pace is unlikely to sustain, the third quarter rebound supports our forecast for stronger activity heading into next year.

**A tighter resale market**

As with home construction, the resale market has picked up steam. Housing prices tend to rise when inventories are low (as measured by months of supply), and that’s been the case in recent months (see the chart below). Alberta home prices, as measured by the MLS® composite benchmark, are up 5.8% over the last 12 months. Calgary has been the main driver (+8.2% y/y) with Edmonton lagging (-1.2% y/y).



[Canada's housing supply shortage: skilled labour capacity | CMHC \(cmhc-schl.gc.ca\)](https://cmhc-schl.gc.ca)

[The road ahead for the economy and housing — fall 2022 update | CMHC \(cmhc-schl.gc.ca\)](https://cmhc-schl.gc.ca)

**US Housing Starts and Completions Increase While Permits Decline in September**

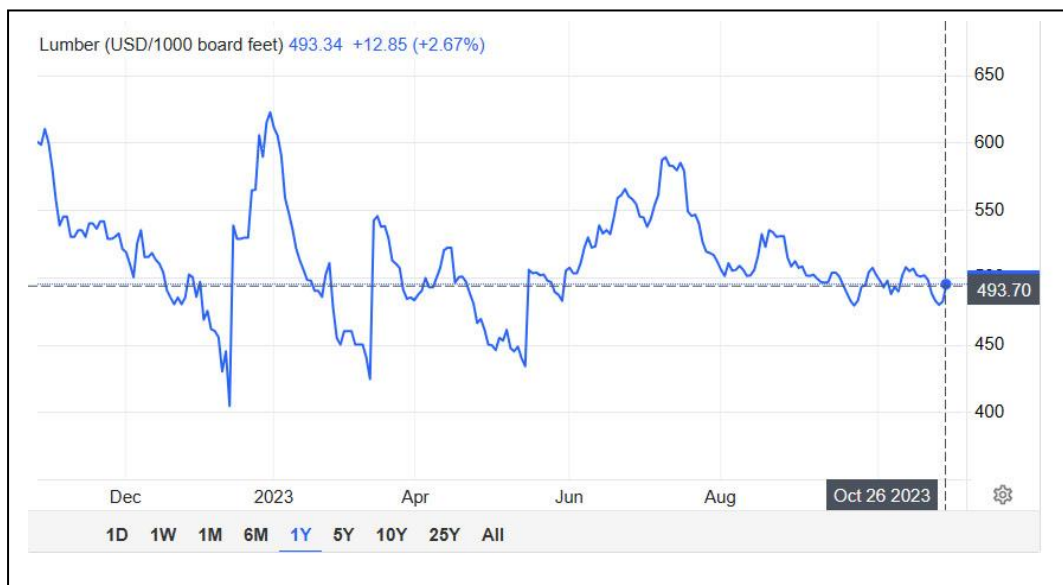
The US Census Bureau on Wednesday (10-18-23) reported that privately-owned housing starts in September were at a seasonally adjusted annual rate (SAAR) of 1,358,000. This is 7.0% above the revised August estimate of 1,269,000 but 7.2% below the September 2022 rate of 1,463,000. Single-family housing starts were at a rate of 998,000; this is 5.3% above the revised August figure of 948,000. The rate for units in buildings with five units or more was 445,000.

Building permits are the forward-looking portion of the report, and in September, privately-owned housing units authorized by building permits were at a SAAR of 1,473,000. This is 4.4% below the revised August rate of 1,541,000 and 7.2% below the September 2022 rate of 1,588,000. Single-family authorizations were at a rate of 965,000; this is 1.8% above the revised August figure of 948,000. Authorizations of units in buildings with five units or more were at a rate of 459,000.

Privately-owned housing completions in September were at a seasonally adjusted annual rate of 1,453,000. This is 6.6% above the revised August estimate of 1,363,000 and 1.0% above the September 2022 rate of 1,438,000. Single-family housing completions were at a rate of 998,000; this is 5.3% above the revised August rate of 948,000. The rate for units in buildings with five units or more was 445,000.

### Lumber

Lumber prices dropped to around \$490 per thousand feet benchmark, inching closer to pre-pandemic levels, as higher interest rates and seasonal patterns continued to depress real estate activity. The latest data revealed housing starts in the US rose by 7% month-over-month to 1.36 million in September 2023, rebounding from the upwardly revised three-year low of 1.27 million in August, but missing estimates of a sharper 1.38 million starts since the growth in mortgage rate dampened housing demand. Still, the ongoing shortage of available homes provided some support for builders. Additionally, tight supply from North American producers and decreased imports of softwood lumber from Europe in the third quarter kept the prices from further decline.



## **Holding the Line on Interest Rates**

As expected, the Bank of Canada announced October 25th that it is keeping its trend-setting policy interest rate at 5%. This is the second announcement in a row without an increase. Since March 2022, the Bank of Canada has hiked its policy rate by 4.75 percentage points.

With this announcement, the Bank of Canada is expecting that the economic slowdown from previous hikes will grind inflation lower. The Bank noted this is already happening: “In Canada, there is growing evidence that past interest rate increases are dampening economic activity and relieving price pressures.” It also said “a range of indicators suggest that supply and demand in the economy are now approaching balance.” The September statement spoke of “recent evidence that excess demand in the economy is easing.”

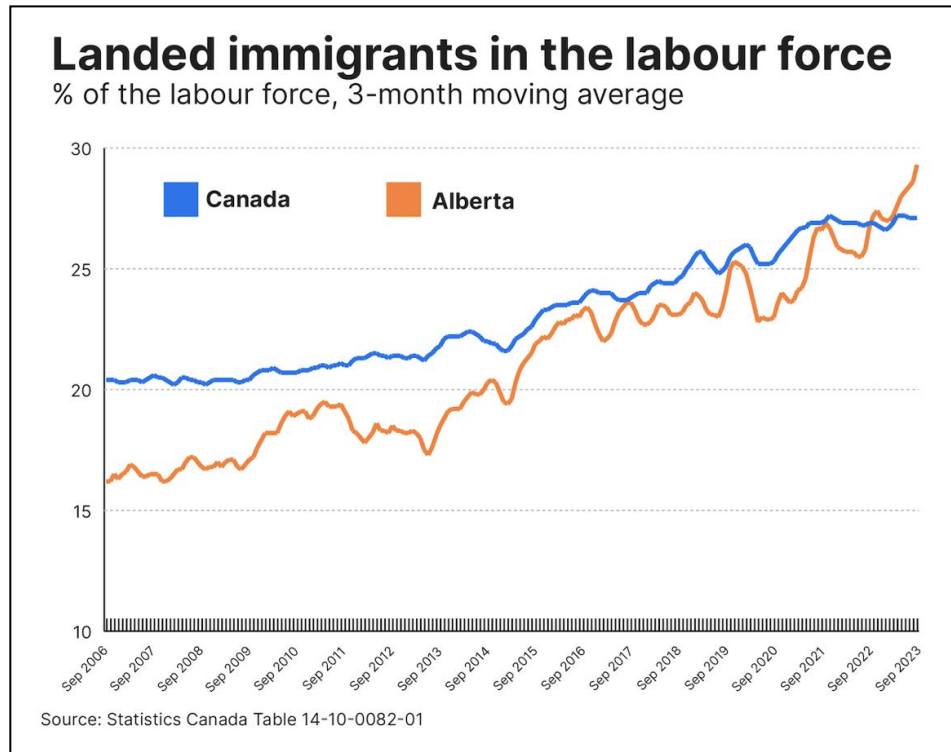
The statement maintains a ‘hawkish’ tone set in the previous announcement. Despite progress, the Bank remains concerned by stubbornly high inflation and is willing to raise rates again if inflation doesn’t cooperate. “The Bank’s preferred measures of core inflation show little downward momentum.” The Bank kept its “prepared to raise rates” warning from September: “Governing Council is concerned that progress towards price stability is slow and inflationary risks have increased, and is prepared to raise the policy rate further if needed.” The ‘wait and see’, data dependent stance was reiterated, with a focus on core inflation readings.

The announcement was accompanied by a fresh set of forecasts in the Monetary Policy Report (published four times a year). As expected, the Bank of Canada downgraded its forecast for the Canadian economy.

Canadian real GDP is now expected to expand by 1.2% in 2023, compared to 1.8% in the July forecast. The 2024 forecast was also downgraded to 0.9%. While a marked downward revision, this forecast is still consistent with a soft landing scenario. Third and fourth quarter growth of 0.8% (annualized) are forecast, following a mild contraction (-0.2%) in the second quarter. Recall that the Bank’s previous forecast came before the release of the second quarter GDP numbers, which showed a 0.2% contraction (versus a 1.5% increase in the July Monetary Policy Report).

Inflation forecasts were revised up this year and next. The return to target is still on track for 2025, but higher inflation is now expected in the near term: “Inflation returns to target about the same time as in the July projection, but the near-term path is higher because of energy prices and ongoing persistence in core inflation.”

[Time for the Government to Reduce Spending Fraser Institute](#)



The above chart shows participation in the labour market by immigration status.

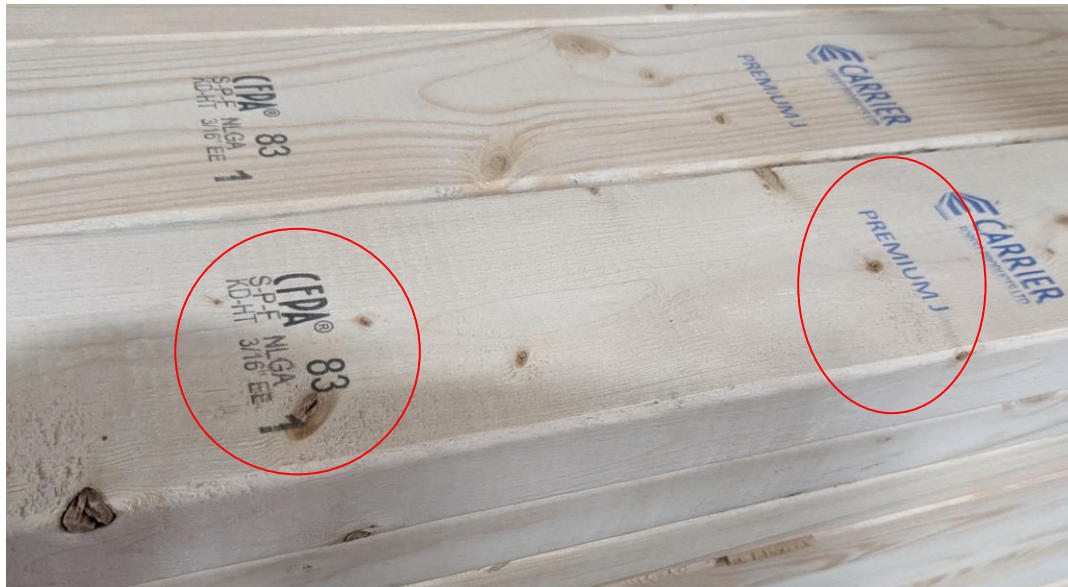
The Labour Force Survey tracks employment by immigrant status—that is, landed immigrants, and those born in Canada. The share of landed immigrants\* in the Alberta labour force reached a record high last month at 29%, or 776,400 (3-month moving average). Over the last 10 years (2013 to 2022), landed immigrants in the Alberta labour force rose 56% compared to essentially no change (+0.3%) among those Canadian born. A similar trend holds across the country, though Alberta’s share has recently eclipsed Canada’s.

## Quality Control

### J-Grade Lumber

I have had a couple of inquiries about the use of J grade lumber in the past weeks and have noticed some being used.

The question is: can a truss plant use J-grade lumber? The answer is yes you can **if** it is also graded with an NLGA grade. If there is no other grade stamp (usually #1 or #2 then you can not use it to build trusses with.



*The lumber pictured above is stamped Premium J but also has a NLGA #1 stamp*

This is an explanation about J grade from Raymond Gendi of Alberta Forest Products Association.

“J-grade is an in-house grade made by most mills. Each mill has their own rules, but they are similar. Essentially it is a 4 square product, not much more than pencil wane allowed. Minimal skip and shake is allowed, no rot. Knots are limited to #2 or better. It really comes down to what the customer wants and mills tweak from there.”

Basically J-grade is made by mills for Japanese clients that want a premium product, but it has no referenced design values assigned to it and it is not listed as a grade by NLGA. The mill is picking the cream of the crop and assigning criteria to it for their specific customer. It may be different at each mill.

TPIC states in 4.1(3)

With the exception of 4.1.(4) all trusses shall be manufactured using lumber graded by **NLGA** rules, with specified strengths as per CSA O86-19 and the following shall apply:

- (a) Top and bottom chords shall be No.2 grade lumber or better
- (b) Webs of 38 x 64 shall be No.2 grade lumber or better

So, if you get a chance to buy J-grade lumber at a reasonable price it may be a good deal, but you must ensure that it also has the NLGA grade stamp on it.



## Health and Safety Toolbox

Similarly, to the Quality topic the WWTA would like to give you a monthly item you can discuss when doing your Safety Toolbox meeting. Winter is coming so you should be having a discussion about **Working in Cold Weather**.

I love this topic because I just repeat it from previous years, but it is a topic that should be reviewed with your workers every year.

The WWTA has a poster for this topic that you may want to print out and post for workers. It can be found on the WWTA webpage at: [wwta cold weather poster](#) Thanks to the guys at Star Building Materials for posing on a very cold day.



Some things to keep in mind:

Frost in the early mornings and in shaded areas can be an unexpected slip and fall hazard, as it may only appear under certain weather conditions. Keep pathways well-lit and sanded.

Shorter daylight hours increase the need for appropriate lighting. - Position lights so they do not create shadows. - Consider scheduling tasks according to the light required. For example, schedule big equipment moves for full daylight hours.

Working at heights poses a higher risk in winter conditions.

- Wind or frost and ice can destabilize supports such as ladders or roofing brackets.
- Snow on rooftops can hide hazards such as skylights or vents. - Workers are more susceptible to cold exposure due to high winds.

- Snow is heavy and adds to the load on roofs or raised surfaces. Consider the maximum load limit of the surface before adding the weight of a worker to that load.

Temperature, wind, level of activity and clothing can all affect how an individual experiences cold. Health effects associated with working in the cold include frostbite and hypothermia. The following controls can help protect workers from cold weather conditions:

- give workers time to adjust to colder conditions before assigning a full work schedule
- provide enclosures and heating systems where practical and possible
- shield workers from drafts and wind
- use a work/warm-up schedule, limiting the period of outdoor work between warm-ups
- use a buddy system to avoid working alone in very cold weather
- educate workers on signs of over exposure to cold which can result in health problems such as frostbite and hypothermia

One thing I think we also may overlook is driving in winter when discussing the topic.

- Ensure vehicles have appropriate tires for the roads they travel. Snow tires are best for most parts of Alberta in winter. All four tires should match in size, type and speed rating. Check air pressure often – air pressure drops about 1 psi for every 5°C.
- Winterize vehicles. Check exhaust, heating and cooling systems for leaks. Test the battery and replace if necessary. Check lights regularly. Change to winter windshield wipers.
- Equip each vehicle with a winter survival kit.
- Scrape frost from windows to improve visibility.
- Remove snow and ice from vehicles to prevent flying snow and ice from endangering other vehicles on the road.
- Remind workers to activate taillights in inclement weather by turning on headlights. Taillights are not lit with automatic daytime running lights.
- Consider developing a winter driving policy that lists responsibilities and expectations for both the employer and workers.
- Consider developing winter driving procedures to outline how to respond to different situations.
- Check the weather forecast and road reports when planning any travel. If possible, postpone trips when conditions are unsafe.

[Working in extreme cold \(alberta.ca\)](https://www.alberta.ca/working-in-extreme-cold)

The Alberta Government has a new format OHS eNews you can subscribe to with all kinds of good material at: <https://ohs-pubstore.labour.alberta.ca/>

## News and Events

### **Dick's Lumber Acquires ZyTech Building Systems**

BOUCHERVILLE, QC, Oct. 11, 2023 /CNW/ - Dick's Lumber, a banner of RONA inc., one of Canada's leading home improvement retailers operating or servicing some 425 corporate and affiliated stores, has completed the acquisition of ZyTech Building Systems, a leader in the manufacturing and distribution of building components and engineered wood products. This is the first strategic acquisition for Dick's Lumber under the ownership of private equity firm Sycamore Partners.

This transaction will allow Dick's Lumber to expand its design and manufacturing footprint to better serve developers and builders in Western Canada. The combined business will bring valuable resources to both companies and will deliver more value to customers via strengthened capabilities, increased product availability, and best-in-class talent.

"We are thrilled to welcome the ZyTech team to the Dick's Lumber and RONA families," explained Andrew Iacobucci, CEO of RONA inc. "ZyTech is a very strong player in its field.

"This acquisition will strengthen our position in the Alberta and Saskatchewan markets and improve how we serve our valued customers."

"ZyTech is known for providing customers with superior service and high-quality products. We are looking forward to better serving our customers through the combined Dick's Lumber and ZyTech enterprise," said Paul McKeown, President of Dick's Lumber. "The combination of these highly complementary businesses will benefit all stakeholders, including ZyTech's dedicated employees. We are excited to begin this next chapter under RONA's ownership," added Mike Powell, President and CEO of ZyTech Building Systems.

### **Certifying Body for Truss Plant Certification**

The Canadian Wood Truss Association is moving towards the creation of a certifying body to be accredited by the Standards Council of Canada in order to certify truss manufacturing companies to the CSA S349:20 standard. The CWTA has contracted the services of the WWTAA Alberta to work towards this certification.

To date draft documents have been developed for the CWTA including: standards, by-laws, a certification scheme, training outlines for auditors, and training outlines for truss companies.

These drafts were reviewed at the recent CWTA meeting October 25 and we are now going to proceed with forming a committee with representatives from each regional association to further develop the standards and policies before applying for accreditation.

Each region will be allowed to have 2 representatives on this committee. If you would like to volunteer or have some more information about serving on this committee please let me know by sending me an e-mail and the WWTA Board of Directors will nominate the Alberta representatives at our next board meeting the end of November.

### **WWTA Online Training**

If you are using the WWTA online training and you have active students that are either done with their training or no longer need access it is important that you change their status to inactive on the system. If they remain active in the system, the company will be billed for their seat.

Companies will be billed for their seats in December.

If you have not yet taken a look at the WWTA online training program I would encourage you to, as no doubt you will be hiring new workers in the near future and it is a good method to get them productive earlier and safer. If you want an overview of the program go to the WWTA website at: <http://www.wwta.ab.ca/truss-training-online.html>