



Standard Schools Concept in Mass Timber

Kit of Parts

Infrastructure Partners
Conference



November 6, 2025

Alberta Wood Products From Seedling to Structure

We have **75 years' experience** in supporting the vision of designers.

500 years of combined knowledge across our company.

Our parent company Northland Forest Products provides us with a secure supply of sustainably harvested Spruce input fiber.





Expanded Capacity:
160,000 sf of new
manufacturing capacity

Local Capacity



150 ft Long spans

The longest we have manufactured so far !!





Why a Kit-of-Parts School ?

- Repeatable
- Pre-engineered – Speed to market!
- Design flexibility



Why a Kit -of -Parts School?

- Enables Faster, Smarter School Construction
- Local Supply, Reliable Delivery





Designing for Wellness: Biophilia and Mass Timber

Children with access to nature exhibit lower levels of stress than those without; children in daylit classrooms have test scores 7-18% higher while children without daylight saw test scores drop by 17%. Similarly, exposure to wood in indoor environments invokes positive biophilic responses. Many people feel innately better in an interior wood environment—associating wood with nature, warmth, and health—and maintain a preference for wood versus other materials. Research shows wood surfaces reduce activation of the sympathetic nervous system, helping to calm the body before the onset of stress.



Founders Hall,
Foster School of
Business
University of
Washington
5 stories
85,000 sqft





GEC



SAIT Campus Centre

GEC Architects
BIRD Construction

An aerial photograph of a modern school building in a snowy landscape. The building features a flat roof with a central section that has a series of small, square windows. The exterior walls are a mix of light-colored panels and darker wood cladding. Large glass windows are visible on the front facade. The surrounding area is covered in snow, with some bare trees and a few small structures in the background. The sky is clear and blue.

Saddle Lake Onchaminahos School

Saddle Lake, Alberta

Reimagine Architects

Jen Col Contractors

Glulam and panels – Made in Alberta

Wood Design & Building Award Winner 2024



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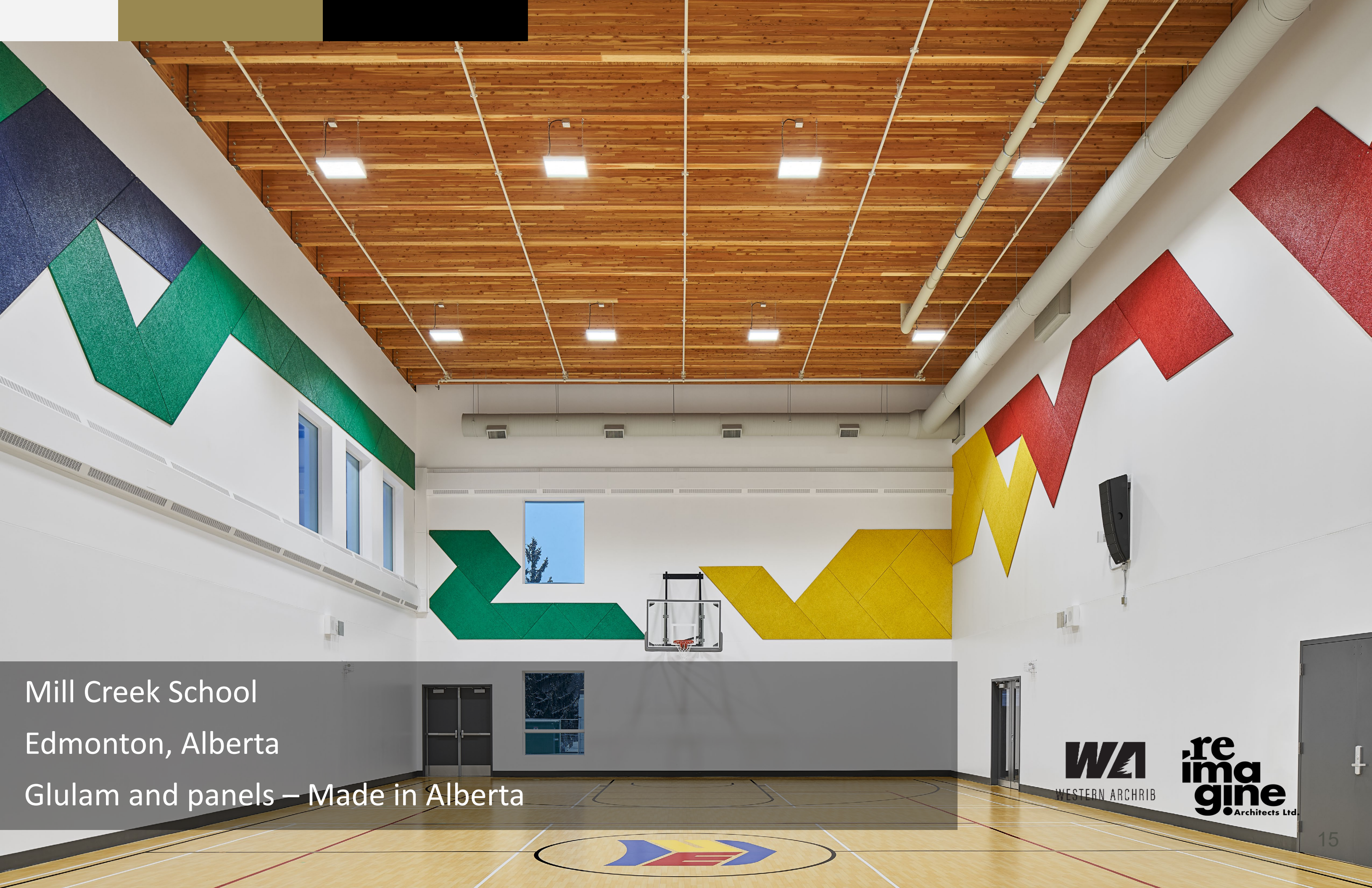
Wood Design & Building Award Winner 2024

WA
WESTERN ARCHIB

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gine**
Architects Ltd.



Mill Creek School
Edmonton, Alberta
Glulam and panels – Made in Alberta



Mill Creek School
Edmonton, Alberta
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Saddle Lake Ochaminahos School

Kit-of-Parts Standard School Concept

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WESTERN ARCHRIB

CAN SCHOOLS BE MADE OF A KIT-OF-PARTS?

How can a school be designed in a modular way to reduce time and cost in the design and construction, without reducing the quality of the school environment for students?

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Architects Ltd.



WESTERN ARCHRIB

Workshop at Reimagine with Western Archrib design and strategy team



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Architects Ltd.

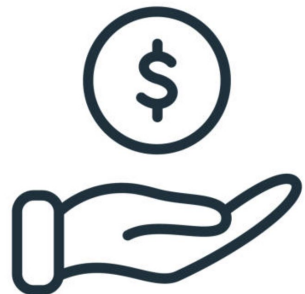


WESTERN ARCHRIB

WHY KIT-OF-PARTS SCHOOLS?

BUDGET

The benefit of using a **Kit-of-Parts** system is that the components are designed and engineered once.



TIMELINE

The use of the **Kit-of-Parts** system reduces project timelines.



21ST CENTURY LEARNING

Having exposed structure can also support learning about material qualities, physics, and sustainability from a real example in their school.



SUSTAINABILITY

A benefit of using mass timber structure is its sustainability in comparison to other structural materials. The sustainability of wood positively contributes to achieving LEED certified schools through lower embodied carbon, **Alberta materials**, and rapidly renewable materials.

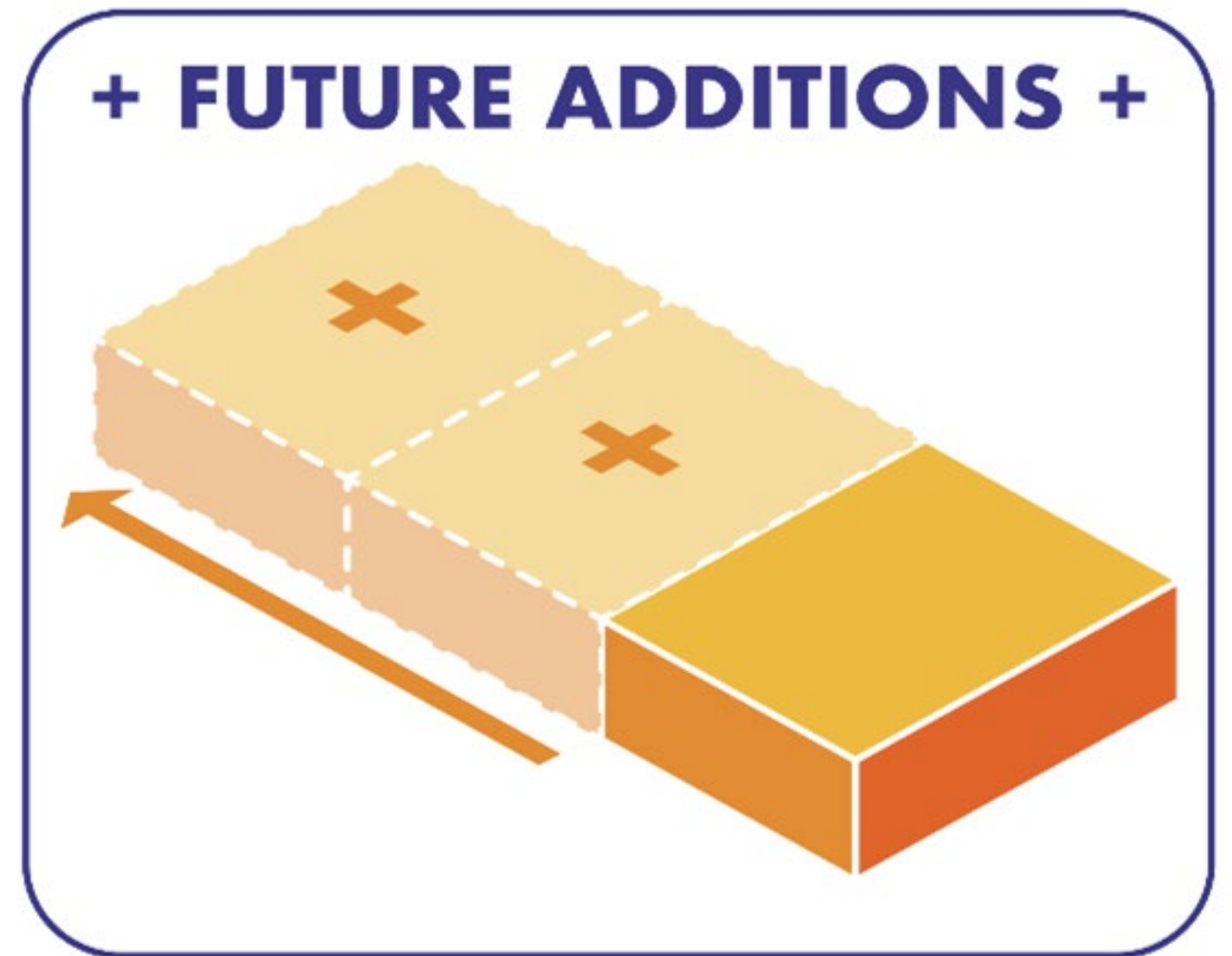


FUTURE ADDITIONS

The use of **Kit-of-Parts** in school design allows future additions to the school with lower cost, quicker timelines, and better quality than current modular classrooms. Schools can be expanded and contracted to accommodate changing neighbourhood needs

FUTURE DECONSTRUCTION

The use of **Kit-of-Parts** in school design allows future DECONSTRUCTION of parts of the school with lower cost than "modulars".



WHAT ARE THE APPLICATIONS?

Saddle Lake Ochaminahos School

To test the applicability of the module sizes in a school design a case study was completed for an existing school design that follows the standard school space size requirements. This case study examines how the school could be redesigned using only the **Kit-of-Parts** modules, where there are opportunities for future expansion, and exploring how many of each module would be used to recreate this school.

CASE STUDY: K-6 SCHOOL

This school design supports 350 students from K-6. The programmatic breakdown of the school spaces can be seen in the table below. Using only standard modules this school can be recreated to make the same space sizes, and maintain the same architectural richness found in this school design.





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