Canadian Wood Council / Conseil canadien du bois

wood WORKS! engineered for strength and style...naturally!

QUICK FACTS - SUSTAINABLE BUILDING SERIES 9

Value-Added WOOD Products

BACKGROUND

For most, wood is a familiar construction material with many different forms and applications. The family of wood products encompasses a wide selection of building materials and systems that includes solid sawn lumber, manufactured wood products (plywood, OSB), and engineered wood components (trusses, wood I-joists, glued-laminated timbers).

The more recently developed products are often referred to as engineered or value-added wood products, to reflect the added design and manufacturing component of their production. The inherent attributes of wood, used wisely, contribute to a greener, more sustainable and better-built environment.

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Abbotsford Recreation Centre, Abbotsford, British Columbia

ISSUE

Building products that earn high marks in green building programs are those that:

- Reduce impacts of extraction of materials from the environment
- Install and use materials efficiently in construction
- Contain renewable and/or recycled content
- Reduce impacts on disposal at the end of the life cycle

No single product is a clear winner in every measurement of sustainability; however, wood products do well in Life Cycle Assessment (LCA) comparisons with other building materials.

WHAT YOU NEED TO KNOW

Engineered wood products enable us to make efficient use of our wood resource. Entire trees, regardless of species, shape, and age, can be used to make engineered wood products. Some wood-based panel products, for example, make use of smaller trees, species not commonly used for lumber, or use chips and particles generated as by-products from other production processes.

Furthermore, engineered wood products can be designed and ordered to specification, thereby reducing construction waste. This helps to balance demand for the larger trees and more desirable wood species. The "Green on the Grand" office building, in Kitchener, Ontario, was the first building built to meet the requirements of Canada's C-2000 program. It used structural members of engineered wood products that reduced construction waste by 75%.

Engineered wood products are designed and manufactured to offer more precise tolerances in stability and strength. This provides greater engineering efficiency because buildings can be designed to use fewer structural components.

Engineered wood products also expand the opportunities for wood use in commercial, institutional and industrial construction. The long clear spans afforded by glued-laminated timbers (glulams), wood I-joists and laminated veneer lumber (LVL) allow for the efficient use of environmentally responsible materials.

Conventional lumber can also be used to increase construction efficiency and reduce waste. For example, manufactured housing can provide significant savings in materials and labour. As well, in site-built housing, Optimum Value Engineering (OVE) techniques have been developed to optimize the use of structural members by suggesting the removal of members from non-essential locations (Note: it is important to ensure that such techniques comply with applicable building codes).

FOR MORE INFORMATION

Visit the Canadian Wood Council's web site at www.cwc.ca or contact a Wood *WORKS!* representative in your region at www.wood-works.org.