

2016 WOOD DESIGN AWARDS - WINNER

Residential Wood Design

Leland Dadson, Architect, Toronto, ON

CLT Courtyard House, Vancouver, BC



“This house is an excellent example of attractive densification using wood to create a striking effect.”

- jury comments

High resolution images available. Please e-mail mmclaughlin@wood-works.ca

This two-storey cross-laminated timber (CLT) house is perched on a hill in central Vancouver. The family home is built for three generations: the owners, their daughter and their two grandchildren, and is designed by their son. Comprised of a 2,600 square foot (242 square metre) main house and a 475 square foot (44 square metre) laneway coach house, the unique siting allows for dramatic views of the scenic city downtown and mountains beyond, but also toward an intimate courtyard formed between the two structures.

An early design decision was to use a CLT structural system and to expose the material as an interior finish. As prefabricated wood panels that can be used for both walls and floors, CLT offered the advantage of quick assembly on site and allowed for long spans without any steel beams or columns. The CLT structure also has the unique advantage of providing a beautiful texture and natural warmth of wood on the interior. Last but not least, CLT provided advantages in terms of acoustic properties, thermal value, fire resistance and seismic reliance – all properties valued by the client and important for the region.

On the main floor, an open living room, dining room and central kitchen take advantage of the views on both sides, as well as offer access through large, full height glazed sliding partitions. Concrete floors with radiant

heat generate enough heat in the winter and also help store solar gain through the east and west glazing. Blackened steel panels also make a strong presence in the design as cladding on the exterior, and on the south wall of the stair with flush, custom-designed LED strip lights. In the courtyard, a steel-clad fountain introduces a water element as a natural complement to the wood.

Wood finish is exposed on the interior of the north and south walls and is dramatically expressed in the design as it rises up the fully exposed two-storey CLT wall along the main stair. A skylight at the roof level brings light down this same whitewashed wood and through the open stair risers, bringing light to the basement. The owner patiently milled every solid wood stair tread to size from a large fallen white spruce tree. The stair rises to access the green roof garden, planted by the owner to increase water retention in the wet climate and allow for a more sustainable footprint. Solar panels can be installed in the future to the roughed-in conduit ready to receive them. The long-term goal to run this home on fully renewable energy would provide an added benefit to this already environmentally conscious design that has a lighter carbon footprint stored in its structure, as it is made out of the natural and renewable resource of wood.