



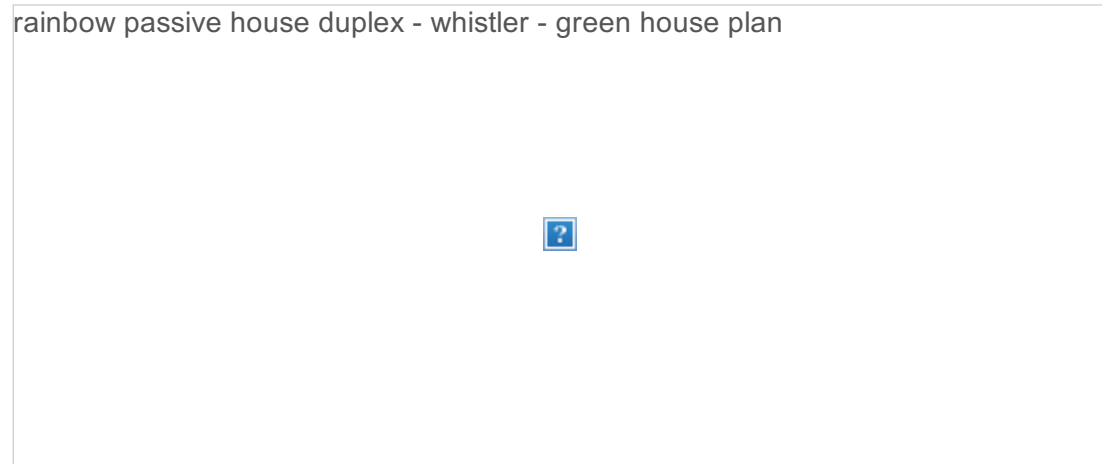
The Blog



Canada's First Affordable Prefab Passive House Complete ... in Whistler!

Posted on 16. Apr, 2012 by [Maryruth Belsey Priebe](#) in [Articles](#)

rainbow passive house duplex - whistler - green house plan



Canada's first affordable [passive house](#) has been completed, and it's a prefab! And in case you think it was designed for a mild climate, think again. Built to withstand chilly Whistler, BC weather, this [Rainbow Passive House Duplex \(RPHD\)](#) house was prefabricated by a Whistler construction company using green building features like solar hot water, high efficiency heat recovery system, rainwater harvesting, high

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performance mini split heat pump and subsoil heat exchanger, and drain water heat recover. And of course, the pre-fabricated walls (R47), floors, and roofing system (R60) came complete with cellulose blow-in insulation by [BC Passive House](#).

The RPHD is also the first is the first passive house built completely in BC using primarily local materials, including cross-laminated timber decking. The flooring is also bamboo, and the windows are triple-paned to provide superior comfort and climate control.

But most importantly, the house will be affordable long-term. The duplex is 2,150 square feet with four bedrooms, two bathrooms, and an unfinished basement. Because of all of the passive house features, the home is predicted to consume 90% less energy for heating and cooling, with utility bills amounting to about \$150 per year – a standard home of this size would cost \$1,500 for heating and cooling annually by comparison.

The house was built as part of the Resort Municipality of Whistler's Price Restricted Housing Initiative to demonstrate that passive house designs can be very affordable. Prefabricating the house significantly cut down on construction costs, as did the fact that the house was constructed in 4.5 days (a conventional home of this size would normally take several months to construct on site).

In the end, the duplex cost about \$250 per square foot, which is very affordable given than anything in that region under \$300 per square foot considered affordable. Additionally, the construction company, Marken Projects, is working on five other passive house prefab projects that will come in around \$180 to \$200 per square foot. This will be yet another example of how well a tight building can perform in cold climes, while saving significant money during operation and costing less to build in the first place.

Check out the time-elased YouTube video on the constructive project.



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