



photo by Richard Stokes

Snow country designs meld form, function, style



photo by Richard Stokes

BY GEORGE KINGSON

There has been no shortage of romantic songs about snow-country houses, but — all fantasy aside — designing and constructing such a home can be a serious challenge.

Architect and contractor Graham Simmons is himself an enthusiastic skier and former Kirkwood ski patrol leader. In recent years he has built half a dozen

homes in Kirkwood, an area where accumulated snowfall at the base of the mountain can reach 20 feet in just a few short months.

"The structural loads are really high up here," Simmons says, indicating a residence he completed a year-and-a-half ago. "This home is designed for 375 pounds per square foot of pressure from snow on the roof. That weight, especially during a theoretical earthquake, generates huge forces that the building must be designed to resist. You need to design your structure very efficiently or you can use up a lot of the budget transferring those loads to the ground."

Light and airy, but very strong

Integrating the structural system with the architectural design allows Simmons to incorporate client wishes, too. "I like to expose and highlight what's holding up the building," Simmons says. "More of my customers have wanted rustic designs with heavy timber. In this home, we went very contemporary, and used exposed steel structural members and a concrete fireplace, which is the backbone of the house."

When you're building a home in snow-country, access is a major concern. No

matter how beautiful or well-constructed the house, if you can't get to it easily, it's a problem.

In terms of shifting loads, Kirkwood homes must be designed so that when the snow does come sliding off the roof, it doesn't land in a heavily-trafficked area.

"The roof can't shed snow or drip where it creates a hazard. Dormers and chimneys in the wrong places can cause glacial action, which will reduce the life of the roof."

Low maintenance is a parameter most of Simmons' clients want: "They're here to vacation, not work on the house."

"I like to specify materials that are very durable and low maintenance," Simmons says. "That's especially important here, because of the bright sun and heavy snow." ❄️



photo by Graham Simmons