Backfill

Big Stairs

British Columbia log builder David Edgeley describes himself as a "functional artist." For the last 12 years, his company has specialized in custom-made log and timber stairs and railings. The assemblies are test-fitted at the company yard in Errington, British Columbia, then disassembled, packed for shipping, and sent to purchasers throughout North America and as far away as Germany and Japan.

The heart of the three-level spiral stair pictured here is a 45-foot Douglas fir log measuring 2½ feet in diameter at the top and more than 5 feet at the butt. Edgeley and his crew cut mortises for the treads with a chain saw — a tool that gets too little respect from woodworkers, in his view. "You can do very fine work with a chain saw," he says. The stair treads themselves were shaped from the flared stumps of red cedar trees. Each 300-pound tread was eased into position with a Bobcat and lag-bolted to the center column and the underside of the tread above.

Once transported to its new home in Washington state, the center column was lowered with a crane and braced in its final upright position; then the builders reinstalled the treads. This job was made easier by the absence of a surrounding structure. (The house itself was built later, around the completed stairs.)

Remarkably — given the sheer tonnage of material involved and the number of projects he's done — Edgeley claims never to have run into problems with skeptical building inspectors. Most U.S. jurisdictions restrict variations between any two risers within a given flight to ⅜ inch, which would seem a tough standard for such heroically proportioned stairs to meet. But Edgeley says the issue hasn't come up, because a consistent orientation of the grain in the massive treads allows them to shrink uniformly, providing a consistent rise. Moreover, he's found building inspectors to be "reasonable people. They understand that logs are different than conventional construction. Even if you were to be a small fraction of an inch off somewhere, it probably wouldn't be hard to work out a solution that would satisfy everyone."

To see a slide show that offers a more detailed look at this project, go to YouTube and type in "amazing double spiral log stairs."— *Jon Vara*

Because they've evolved to bend in the wind, large trees are surprisingly flexible. To eliminate any distortion of the trunk during layout and initial construction of this spiral stair (above), the builders carefully braced the center column in the position it would later assume when vertical (left).

Each individual cedar tread is the full thickness of a riser; the natural curvature of the slab edges provides the code-required nosing. A custom iron railing, not yet installed, will protect the adjacent windows.