

Post Attachment Resists 500-Pound Load

In testing done in November, Testing Engineers of San Leandro, Calif., found that using an EZ Stairs Bracket in a post-support assembly met the code requirement for a lateral load applied at the top of a guardrail.

The test was performed on a 24-inch-wide three-stair assembly made with Douglas fir (below). A 4x4 post was attached to



two parallel 2x6 stringers with two $\frac{3}{8}$ -inch-by-6-inch galvanized bolts inserted through an EZ Stairs bracket (top right) and 2 $\frac{1}{2}$ -inch O.D. malleable steel washers and nuts on the outside of the post (bottom right). Progressively greater loads were applied 42 inches up the post from the tread until the assembly failed. Of three test trials, the lowest point of failure was at 570 pounds; the highest load withstood was 617 pounds.



The 2006 IRC requires that a guardrail or handrail withstand "a [200-pound] single concentrated load applied in any direction at any point along the top." But as discussed in *Question & Answer* in the May/June 2007 issue of *PDB*, accepted engineering practice calls for a safety factor of 2.5 when testing structural connections — thus the need to test to a 500-pound load.

Adam Burch of EZ Stairs notes that the bracket can be used in retrofits, as well. — *Laurie Elden*