

Testing Single Posts vs. Testing Railing Assemblies

The article “Guardrail Post Kits” [Sep/Oct 2014] may lead readers to mistakenly conclude that the Titan 4x4 post anchor doesn’t comply with residential guardrail standards. While the ICC-ES AC273 test criteria mentioned in the article permits “worst-case” scenario testing of a single freestanding post (similar to the procedure followed by author Mike Guertin), it primarily calls for testing of the guardrail assembly, where the guardrail consists of two newel posts at maximum center-to-center spacing, with a rail section connected between them. The middle of the top rail and the end of the top rail above the end post are sequentially subjected to a 200-lb. load, measured for allowable deflection, then subjected to a 500-lb. (safety factor) load for at least one minute.

When tested by third-party engineering firm Intertek in lab conditions using standard treated lumber in guardrail con-

figurations as defined above, our Titan post anchors comply with the load standards for 36-inch-high posts with 6-foot post intervals, as well as for 42-inch-high posts with 4-foot post intervals.

Of course, there’s nothing wrong with building a guardrail assembly using single posts that can each sustain a 500-lb. load—the scenario presented in the article—since it will more than meet required guardrail loads. But a railing isn’t a single post. It is a plurality of posts forming a unitary structure that behaves as a system, and it is the final performance of the guardrail system that the code is concerned with. A post by itself may not resist a 500-lb. load, but might when built into a finished guard rail because of the distribution of the concentrated load along the rails to the adjacent post.

The 4x4 Titan Post Anchor is not marketed or sold as a 500-lb.-rated stand-alone post, but as a component in a railing sys-

tem that when used as instructed in accordance with our guidelines has indeed been shown to meet code requirements.

There are situations where a 500-lb.-rated post may be required, perhaps because the posts will be taller or will be installed at 7-foot or 8-foot intervals. They may also be required in a commercial setting. But products that have been specifically designed to resist 500-lb. loads as a freestanding post range in cost up to \$100, while Titan post anchors—which have been optimally designed and tested to meet the minimum required loads for a residential deck railing—cost around \$20 each. Many homeowners simply want a code-compliant wooden railing and have no need to exceed the code by more than the safety factor (which is 2.5 times more than the actual design load).

Richard Bergman
President
Titan Building Products

Advertisers, Take Note

If for no other reason than the integrity of the magazine, someone should review information and, more specifically, photos submitted by advertisers. Recently, for example, a manufacturer touted the wonders of its screws without showing whether the heads are Phillips, slot, square, Torx, or the combo square/Phillips. But that is only minor compared

with the deck shown in the accompanying photo, which features a 1960’s-style 2x2 PT rail that would be prone to coming loose and liable to rot at the contact point with the rim joist, and that would collect dirt and pine needles where it meets the deck edge. As if that is not bad enough, the post-to-beam connection is apparently toenailed, as no metal hard-

ware is visible. Also, it would take very little movement to rock the deck back and forth, since there are no angle sway braces on the posts. Makes one wonder how old the photo is, and who built the deck.

Bob Hawkins
American Home Services (formerly
Decks Plus)
Lynden, Wash.

More About Guard Post Kits

I recently received a call from a reader who had seen my article on guardrail post kits and was trying to sort out how to attach posts to a 2x6 frame. His question was whether or not these post kits would work with 2x6 rather than 2x8 framing (the size framing used to build

my test assembly), provided that similar blocking to the detail described in the article was used.

I told him that the only way to know for sure is to test the assembly, but that I saw no reason why you couldn’t use 2x6s, since the key is the blocking, and

the only change would be the 2-inch height differential with the rear block. At worst, the rear block would have to be doubled to provide enough space for additional screws.

Mike Guertin
East Greenwich, R.I.

LETTERS

Another Option for Fire-Resistant Decks

My company installs ICC-ES Division 7 pedestrian traffic coatings. The ones we install are waterproof and qualify as Class A/1-hour fire-rated roof cover-

ings, though most haven't been evaluated for use as decking in a Wildland Urban Interface (WUI). They aren't mentioned as an option to traditional cedar

or composite decking in Steve Quarles' recent Q&A about fire-resistant decks (Sep/Oct 2014), but I think they should be. I once saw a YouTube video where a firefighter described a wood deck as "organized kindling." Indeed, a quick search of YouTube videos shows many a home and deck going up in flames after burning embers (simulated by "brands" in most fire testing) land on a wood deck. I've set my Google account to find news articles about deck fires, and almost every day I receive a new alert about a house or deck fire caused by a cigarette tossed into a planter or by coals dropped from a grill.

In fact, I have one client whose apartment building was firebombed by the rival gang members of a tenant. His deck over the garage and his second-floor walkways were protected by the concrete-based walking deck system I'd installed several years earlier, which the fire department credited with helping prevent the flames from spreading into living areas and for allowing time for the tenants to escape. Although there was extreme damage to the joists and plywood in the ceilings, the coating did not burn through.

It would be interesting to match several Class A/1-hour fire-rated pedestrian traffic coatings against redwood, cedar, and composite decks in actual ASTM fire testing. I'd bet good money that the coatings would come out on top, which is why I believe that they should be used instead of traditional wood or composite decking for any deck built in a WUI.

Bill Leys

Division 7 Waterproofing Consultants
Arroyo Grande, Calif.

We want your two cents.

E-mail us at prodeck@hanleywood.com or mail letters to: Professional Deck Builder, 186 Allen Brook Lane, Williston, VT 05495

THE GOLD STANDARD FOR CORROSION PROTECTION

If you use treated lumber for decks, you need corrosion resistant connectors and fasteners. We offer anchors, framing angles, straps and fasteners in Gold Coat for twice the corrosion protection. Manufactured exclusively by USP Structural Connectors in the USA, our multi-layer system protects the integrity of the structural connector with two layers of corrosion resistance. The top layer is a specially formulated organic polymer designed for outdoor applications and contact with treated wood.

Learn more about Gold Coat at www.uspconnectors.com

GOLD COAT

USP
STRUCTURAL CONNECTORS
MITek

To Order: 1-800-328-5934 or uspcustomerservice@mii.com

© 2014 MITek, All Rights Reserved.