

Why Type II handrails are needed?

It has been decades since the face of the stair industry was changed by a study of just 20 subjects standing in a static position, asked to push and pull on a handrail. This study was twisted into a reason to restrict the shape of handrails even though the researcher Dr Brian Maki himself warned that it should not be used to influence code. Instead he called for additional testing. In direct conflict with the researcher's own warning this study was zealously taken to the code authorities and successfully used to restrict the shape of handrails.

Millions upon millions of dollars of wooden handrail business has been lost due to a vicious voluminous cycle of obscured but redundant referrals to Maki's first study. Paper after paper has been written, all leading to a citation of this preliminary work as the fundamental reason to restrict handrails. The resulting misunderstanding by the code authorities has become a calamity for the stair industry.

The SMA however was able to fund the additional independent testing performed by the same Dr. Brian Maki. These were dynamic tests of handrails in use on stairs under the most stressful of conditions, arresting a fall. These tests results and others of equal significance by Simpson, Gumpertz & Heger Inc finally changed the International Residential Code in 2002. Now it is time for the same change in the International Building Code.

The larger profiles allowed by TYPE II handrails are often necessary to fabricate continuous rails and securely fasten the sections together. Mounts for such stronger rails can be further apart simplifying installation. TYPE II rails provide more design options for the consumer and when compared to welded metal fabrication options can also provide low cost solutions that can be fabricated with ordinary carpentry tools and skills.