Trus Joist™ Weyerhaeuser

TJ-PRO™ RATING

FLOOR PERFORMANCE

CONSULTATION GUIDE

A poor performing floor can harm a builder's image, compromise build efficiency, and cost money—**regardless of demographic.** That's why we developed TJ-Pro Rating. For over 50 years builders have looked to the Trus Joist name for guidance on floor performance, and our decades of proven success with TJ-Pro Rating is one of the biggest reasons why.



BUILDERS, USE THIS GUIDE TO:

- Understand floor performance and the TJ-Pro™ Rating system.
- Design floors your customers expect.
- Manage performance through purchase decisions.
- Learn why span charts are not measures of performance or customer satisfaction.
- Balance image, efficiency, and financial goals with decision-making.

TJ-Pro Rating is featured in these design software platforms.

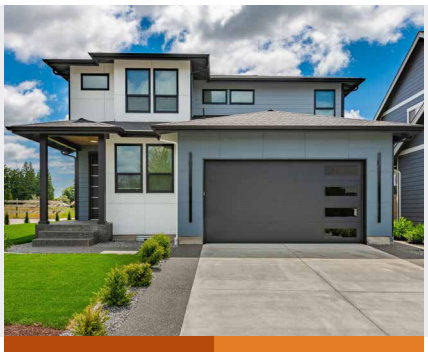
JAVELIN® SOFTWARE BY WEYERHAEUSER

FORTEWEB® SOFTWARE BY WEYERHAEUSER

Autodesk® Revit® linked to Forte®

TJ-PRO RATING AND FLOOR PERFORMANCE

Point values up to 65 are assigned using complex algorithms based on field and laboratory research conducted on over 600 floor system assemblies. It also factors in the variables listed in the **Key Factors Affecting Performance** on page 4. Ranges can then be regularly correlated to performance expectations for the builder demographics listed below.



Entry-Level

Much of the focus in this demographic revolves around **Economy** (cost) and **Efficiency** concerns. Every dollar counts and cash conversion cycles are monitored closely so there is usually pressure around the construction schedule. TJ-Pro Rating is used in this market to make sure builders are not "overbuilders" by keeping the floor performance "in-check".



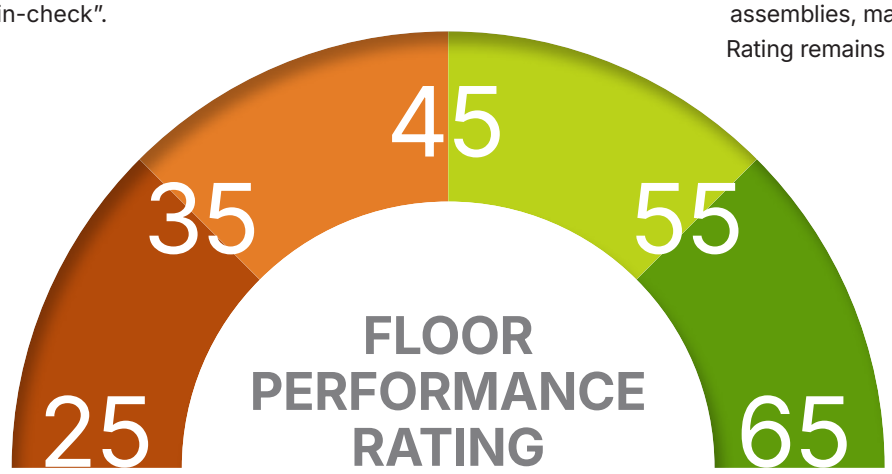
Move-Up / Mid-Level

Builders in this demographic are generally driven by **Efficiency** and **Image**. With constant changes to remain "fresh" and competitive, floor plans can be numerous and contain many options. Use TJ-Pro Rating to maintain consistency in floor feel across the base-model plan, all available options, throughout your subdivisions, and across your business.



High-End Luxury

Decision-drivers for builders in this demographic generally revolve around **Image** and **Efficiency**. In our experience, homeowners in this category expect point values of 45 and greater. Only TJ-Pro Rating can validate that your quality and your brand are not being compromised through changes in floor system design. If you look to improve efficiency by using different assemblies, make sure your TJ-Pro Rating remains relatively consistent.



Enhanced Options

Builder sales teams may be able to address a buyer's previous dissatisfaction with underperforming floor systems by offering upgrades, particularly in competitive subdivisions. Use base models with standard floor systems (and performance) to compete but consider an "improved floor option" to both create up-sell opportunities and address those homeowners who may be more sensitive to floor feel than most.

BY THE NUMBERS

Today's consumer understands technology. Explain how your business utilizes the industry's leading design tool that goes beyond the building codes' static deflection and looks at the entire floor system.



FREQUENCY

Frequency is the number of waves per second created when you step on the floor. Generally, low frequencies are uncomfortable. The less stiff the joist, the lower the frequency.



DAMPING

Damping is the ability of the floor sytem to "absorb" the wave that is introduced. The faster the wave is absorbed, the more solid the floor will feel.



PERCEPTION

How a floor feels is highly variable from one person to another. The proprietary algorithm behind TJ-Pro Rating takes this into account. TJ-Pro Ratings are correlated to customer satisfaction which takes the guesswork out of floor system design.

At 45 points, customer satisfaction is 84%. At 65 points, it's nearly 100%.





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DECISION FACTORS

At any point, for any builder, different drivers of business decisions exist. Usually, one driver will override the others. As you differentiate your offering from competitor's, determine where you are in this cycle.



BEGIN YOUR TJ-PRO™ RATING EXPERIENCE TODAY

Simply send an e-mail to **wood@weyerhaeuser.com** with your contact information and a note that you would like to have your plans reviewed to determine how your TJ-Pro Rating aligns with the type of home you are building. We will route the request to your Trus Joist® Territory Manager so we can be sure to understand and focus on your needs.

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Key Factors Affecting Performance

- **Basic Stiffness** is a combination of joist depths and span.
- **Composite Action**—Careful nailing in conjunction with construction adhesives increases basic stiffness.
- **Continuity**—Continuous joists over several supports generally perform better than simple spans. Care must be taken if the joists continue into another occupancy.
- **Joist Spacing and Deck Stiffness**—Reduced spacing or increased deck thickness generally improves floor performance.
- **Ceilings** directly applied to the bottom edge of the floor members, or equivalent 1x or 2x strapping, is a performance enhancement.
- **Beams**—Floor systems supported by steel or wood beams tend to feel less stiff than those supported by solid bearing walls.
- **Bridging or Blocking** can be a contributor to improved floor performance.
- **Non-bearing Partition Walls** dampen vibration and improve floor performance when installed transverse to the floor joists.
- **Mass** reduces damping in a floor system, causing a decrease in floor performance. This impact is more noticeable as span lengths increase.

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