

BEAZER HOMES: Predicting Performance



Boise Cascade®



EXCEEDING EXPECTATIONS

Whether you build five homes per year or thousands, homebuilding is a challenging business. And as homebuilders grow, the types and magnitude of some challenges change.

For Beazer Homes, maintaining a consistent customer experience became a major area of focus as the company grew.

Beazer relentlessly works toward building every home to meet its high standard, with a commitment to ensuring consistent quality, durability, and comfort for homeowners.

"With 16 divisions across the country offering various product types, building material availability, and regionally specific construction techniques, it's no small task to ensure each home meets our rigorous quality standards," explains Jim Moore, Senior Vice President of Operations at Beazer Homes. "We want our homebuyers to experience the difference in our homes, whether they're buying in Florida, California, or anywhere in between."

Beazer's Stonewood Estates in Durham, NC. DOE Zero Energy Ready Homes™





Boise Cascade®

QUALITY CUSTOMERS CAN FEEL

One area Beazer Homes recognized as critical to a home's quality was the performance of its floor system. Specifically, Allan Merrill, Beazer Homes CEO, and his team wanted every Beazer home to meet a high standard in stiffness, performance, and overall comfort no matter the floor plan or the region in which it was built.

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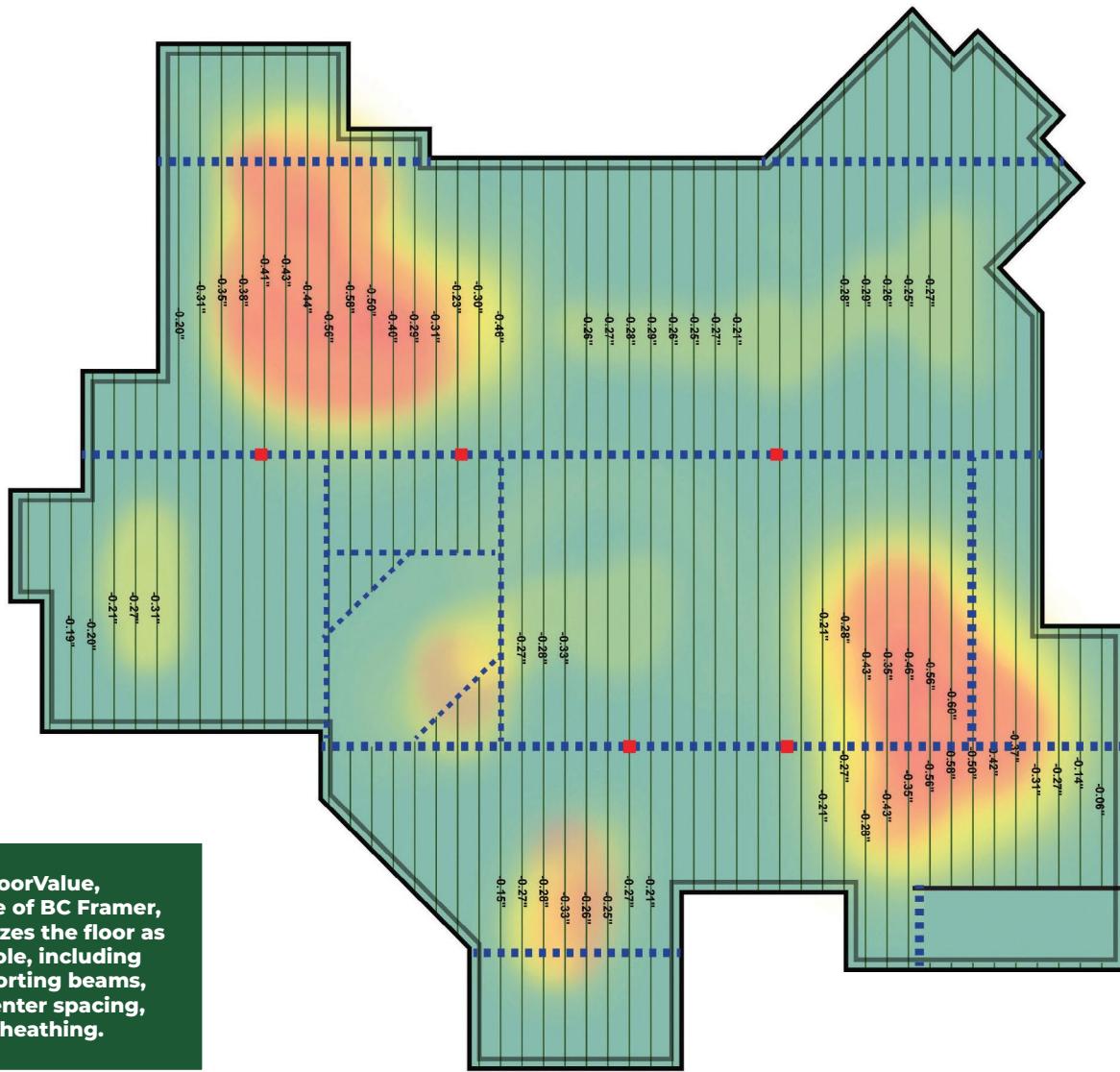
— **JIM MOORE,**
Senior Vice President of Operations at Beazer Homes

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It was a challenge the industry had been working to solve for decades, with some Engineered Wood Product suppliers developing numerical grading systems representing the performance characteristics that they suggest customers prefer.

While helpful, this approach runs into significant limitations because it does not examine the floor system holistically. For example, to truly understand how a floor will perform, builders must consider how design elements — like a large kitchen island or bathtub — may potentially impact the floor performance. Otherwise, builders risk overbuilding, or having homes with bouncy floors and dealing with repeated callbacks in an attempt to address unsatisfied homebuyers.

When the Beazer Homes team approached Boise Cascade Engineered Wood Products with this challenge and their goal to give homebuyers consistent, predictable floor system performance, the Boise Cascade® team initially did not have a solution, but later came back to Moore with something they believed was the answer he had been seeking.



The answer? BC FloorValue® performance rating tools integrated into BC Framer®. The tool analyzes the 3D floor model as a whole, including supporting beams, on-center spacing, and sheathing. While other systems only measure the attributes of individual components, BC FloorValue measures deflection, vibration, and more across the entire floor system, pinpointing potential problem areas before construction begins. (A lightweight version measuring individual structural members is also an included feature in BC Calc®.)

BC FloorValue generates an easy-to-understand “heat map” of the entire floor system, giving designers a look at the overall performance and feel while also providing granular control of potential design fixes or product substitutes.

“The heat map is a great visual representation of what’s happening in the floor,” says Gus Stallings, Boise Cascade EWP National Accounts Director. “It’s like X-ray vision that allows anyone to quickly understand performance details of the entire floor without combing through a bunch of fine print, details, or product specifications jargon.”

HIGH-PERFORMANCE PARTNERSHIP

Working closely with Beazer Homes' Jim Moore, the Boise Cascade team provided training on using BC Framer to perform the BC FloorValue analysis, education on how to interpret the results, and guidance on adjusting the design to tailor the floor's performance to meet Beazer's expectations.

Traditionally when a new floor plan is developed, homebuilders build a prototype home, then work out the kinks each time they build it. This is both time-consuming and expensive. But with BC FloorValue, Beazer Homes can fine-tune and work out any potential issues with the floor system before they build.

Today, every Beazer home is proactively evaluated with BC FloorValue to confirm that the floor system meets the company's rigorous performance standards.

In just minutes, designers can optimize the price-to-performance tradeoffs and quickly see the impact of changing the product series, spacing, floor sheathing, or any number of other options. Then they can make changes to the plan in just seconds, with no need to redraw.

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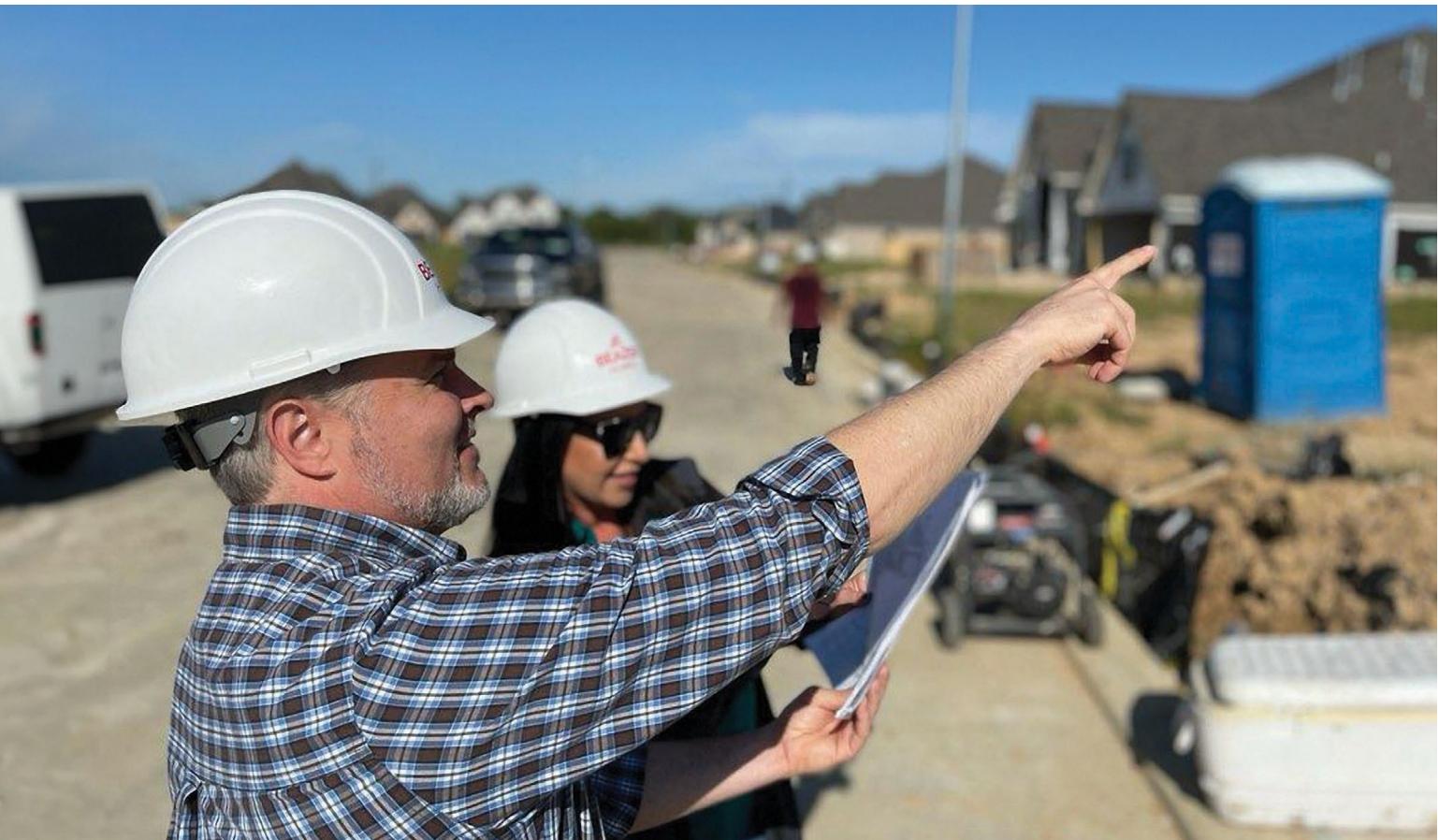
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"One of our goals is to exceed our customers' expectations while maintaining our dedication to the environment," Moore states. "BC FloorValue helps us use the right amount of the right materials in the right places, reducing the potential for both wasted material and labor."

BC FloorValue works hand-in-hand with the predictable performance of Boise Cascade Engineered Wood Products. Unlike floor systems built from dimensional lumber, such as open web trusses or 2x10s, Boise Cascade BCI® Joists provide consistent performance and dependability from piece to piece, allowing Beazer Homes to get the results they anticipate without a bunch of trial and error.



Not only is Beazer Homes focused on quality, but is also building homes ahead of current standards and was the first U.S. national homebuilder to publicly commit to that by the end of 2025. This means every home they build will meet the requirements of the U.S. Department of Energy's (DOE) Zero Energy Ready Home™ program. According to the DOE, the program incorporates building science innovations and practices to achieve at least 40-50% greater energy efficiency than a typical new home.

"We're committed to making sure every home lives up to the Beazer name and our goal to provide extraordinary value to our customers," Moore says. "It's products, partnerships, and technology like this that helps that happen."

BC FLOORVALUE® QUICK LOOK

CHECK

a floor plan performance
in just minutes

ANALYZE

vibration and see how the
floor system ranks on an
easy-to-understand scale

SEE

solutions and clarify costs
for any necessary upgrades

EVALUATE

different product series,
on-center spacing,
and sheathing
thickness for the optimum
price/value relationship

UNDERSTAND

the contribution of
sheathing span between
joists to the overall feel



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