



## CHINBURG PROPERTIES | ONE STEP AHEAD

At Laurel Court in Portsmouth, NH, Chinburg Builders has taken the next step in building and selling high-performance homes that exceed HERS Index standards.



**Project Team:** (Developer and Builder) Chinburg Properties, (Engineers) Ambit Engineering, (Landscape Design) G2 Plus 1 Landscape Design, (Architects) Artform Architecture and (Realtor) The Gove Group

**Location:** Portsmouth, New Hampshire

**Completed:** Model Home Opened March 2012.  
Project Completion Spring 2013.

**Description of Homes:** Craftsman and Bungalow Styles, 3 bedroom, 2 1/2 baths, 1500 – 2400 sq. ft.

**Average HERS Score:** 52.7

**Estimated Annual Energy Savings:** \$1250

**Project Website:** [laurelcourtportsmouth.com](http://laurelcourtportsmouth.com),  
[chinburg.com](http://chinburg.com)

### OVERVIEW

*In homebuilding, especially these days, the key to a successful and sustainable business model is staying ahead of the competition, whether it's with location, value, design or performance.*

In a small enclave of 19 homes in Portsmouth, NH, Chinburg Builders leveraged its longtime passion for better-built housing and taste for right-sized, regionally appropriate design and efficient land planning to distinguish itself as a market leader on all counts.

The builder's Laurel Court community no doubt benefitted from an enviable location — a neglected infill lot a mile from town — and price points that suited everybody from empty-nesters to Echo-Boomers. Chinburg's continually evolving and market-leading commitment to energy efficiency and overall housing performance has led Laurel Court to the cusp of a sellout, less than a year after opening.

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But, it didn’t happen overnight. Beginning with single-family homes built on standalone lots in the 1980s, Chinburg has continually investigated and integrated ways to improve its building practices, and how to merchandise and market them effectively.

“It’s been our philosophy for 25 years to do things really well and to evolve with every project,” says Jen Chinburg, the company’s marketing director. “We’re motivated to learn about the latest technology and methods.”

Laurel Court is simply the latest iteration of those efforts. Homes there are achieving Home Energy Rating System (HERS) scores up to 55 percent better than energy code minimum, qualifying as “high-performance” per federal ENERGY STAR standards and potentially saving homeowners nearly \$1,000 a year on energy bills compared to conventionally built homes in the area. With typical new standard homes rating a 100 on the HERS Index, the Chinburg homes save nearly double the amount of energy with an average HERS score of 52.7.

That boost in performance, says in-house LEED Accredited Professional Geoff Spitzer, hinges on an improved thermal shell. “The first change we made to our building practice was to pay attention to tightening the envelope,” he says, such as using expanding foam around windows and doors and applying flash-and-batt wall and roof cavity insulation. “Attention to detail is essential to building high-performance homes.”

Another significant upgrade was to replace standard wall and roof sheathing with the ZIP System® R-Sheathing from Huber Engineered Woods. The system bonds a structural engineered wood sheathing panel to one-inch thick foam insulation and features an integral air barrier on its exterior surface.



## BUILDER PROFILE

**Chinburg Builders, Inc.** is a fully integrated development and construction firm with over 20 years of experience in New Hampshire and Maine. Chinburg Builders has grown from a small family business to the largest builder of homes in the Seacoast region, while maintaining its fundamental values of integrity, honesty and quality. In addition to new construction, the Chinburg portfolio of services includes: general contracting, construction management, renovation and restoration, commercial and residential rentals, and property management.

Chinburg Builders has been building ENERGY STAR homes since 2002 and is committed to innovative, sustainable and energy efficient building practices. The experienced staff of Chinburg professionals can tap into a wealth of knowledge and resources to take any project from conception to reality. The company’s senior project manager is a LEED Accredited Professional. LEED is the highest industry benchmark for certified green building.

The company was founded by New Hampshire native Eric Chinburg in 1987. A civil engineer with an eye for quality and a progressive development philosophy, Chinburg has become a pioneer in innovative approaches to development and building. Open space development, mill renovation, and urban revitalization projects have received regional and national attention for their positive impact on communities and the people who live in them.

In addition, Chinburg Builders’ reputation as a premier homebuilder of distinct, high quality properties has earned the firm numerous local and awards for excellence and national recognition.

With every new venture, Chinburg Builders remains committed to delivering quality that meets – and exceeds – customer expectations.

## TOP 5 ENERGY EFFICIENCY FEATURES



1

Spray foam batt insulation



2

ZIP System® R-Sheathing



3

Caulk-sealed bottom plates



4

Compact solar water heating system



5

Energy-efficient heating and cooling equipment

The sheathing system not only combines insulation, sheathing and an air and moisture barrier into one application (thus saving time on the job site), it also helps ensure proper installation of those elements to achieve the tight and insulated envelope Chinburg needed to deliver on its energy-saving goals.

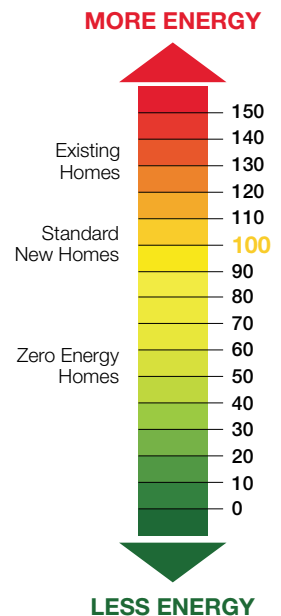
“Wrapping the building in rigid foam increases the overall wall assembly R-value by more than 20 percent—which also reduces thermal bridging through the structure,” says Drew Trafton, an associate analyst for Energy Efficiency and Renewable Energy at GDS Associates, Inc. in Manchester, NH, the third-party energy rater for Laurel Court. “The ZIP system (also) considerably reduces air infiltration, which is a major cause of heat loss.”

Among other tactics, Chinburg used a solar water heating system and downsized the heating and cooling equipment to further reduce up-front and ongoing costs without sacrificing comfort. The framing crews caulk-sealed the sheathing panels to the top and bottom plates of the wall framing to further tighten the envelope against thermal loss.

Fortunately, Chinburg has been able to expand its green building practices without having to seek out new trade partners or specialty suppliers. “In most cases, we’re able to work hand-in-hand with our existing subcontractors and vendors to achieve our high-performance goals,” Spitzer says.

## UNDERSTANDING THE HERS INDEX

The Home Energy Rating System (HERS) Index is the industry standard by which a home’s energy efficiency is measured. To calculate a home’s HERS score, a certified Residential Energy Services Network (RESNET) home energy rater carries out an energy evaluation. A home with a HERS rating of 50 is 50% more energy efficient than a standard new home and 80% more efficient than the average resale home.





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– Jen Chinburg

“We’ve pretty much brought our trade partners up to speed as we’ve gone along,” adds project manager Dave Lauze. “For the most part, they’ve gladly followed.”

In addition to providing in-field training on new products and systems, Chinburg also invited subs and suppliers to participate long before construction started at Laurel Court. “One of the biggest aspects of the project was to adopt an ‘integrative process,’” Spitzer says, in which the design, engineering, production and sales teams collaborate from the beginning to value-engineer and determine the performance standards for the project.

Having an in-house LEED-AP such as Spitzer is another departure from the homebuilding norm — and another advantage for Chinburg Builders. “Geoff really helped frame the program for us,” says Paul Kerrigan, CEO of Chinburg.

Despite integrating new practices and products that increased costs by nearly \$8,000 per house at Laurel Court, Chinburg’s adept use of land and attention to high-level housing design allowed the builder to retain competitive pricing from the mid-\$300s for homes ranging from 1,500 to 2,800 square feet.

“There’s been a shift in the marketplace to smaller, right-sized homes that look great and live beautifully, as well as being energy efficient,” Chinburg says. “People have really responded to these homes, and word spread quickly.”

For any builder in the current housing economy, that’s the best way to stay one step (or more) ahead of the competition.



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