



## PRESS RELEASE

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### **Eco-Friendly Home Featured on Fall Season of *This Old House***

*Crafted Off-Site—Then Assembled On-Site During 16 Episodes Starting Thursday, October 2.*

**Walpole, NH** – In New England, where it’s often colder than a well digger’s knees, there’s a saying that goes: “Everyone complains about the weather, but nobody does anything about it.” One New Hampshire builder of high performance homes is proving to be the exception.

Bensonwood Homes, known for its innovative, energy efficient, and highly durable homes, and *This Old House*, PBS’s long-running and venerated home improvement TV series, have joined forces to build a new house. And it’s not just any house. This home, with its Open-Built®, pre-engineered construction elements, super tight envelope, and timberframe structure—capable of holding back the elements for centuries—may well portend the future of homebuilding.

In a shift from their standard format, *This Old House* partnered with custom homebuilding company, Bensonwood, to build a *new* timberframe home that will look like an old barn, while at the same time feature energy saving design, sustainable products, and other state-of-the-art technologies.

The highly efficient, highly adaptable house—fabricated in Walpole, NH and assembled on site in Weston, Massachusetts—is reminiscent of early American New England barns. But there’s nothing 18th, 19th—or even 20th century about it. Its Open-Built® production methodologies, reduced energy requirements, and its ability to adapt to future remodeling and technologies place the house firmly in the 21st century!

### **Pre-Finished, Pre-Engineered Construction Elements—Built to Go**

Just west of Boston lies the town of Weston. Once an agricultural region, the farms were gradually lost to the suburbs and now, nearly 300 years since the first barn was raised, few authentic examples remain. It was the open, utilitarian spaces and period details of these barns

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that first inspired the Favat family—Pete, Amy, and their children, 15-year-old Cian and 12-year-old Juliette—to recreate the rustic charm of these lost buildings in their new home.

Centuries of timeless craft are joined with urgently needed 21st century technologies in the creation of the Favat's dream home. Long time *This Old House* contributor and building maverick, Tedd Benson, along with his team at Bensonwood, will usher in this new era of highly sustainable, energy efficient home design and production. The home was pre-finished off site in large, Open-Built® construction assemblies, then trucked to the site and assembled in under 25 working days. Roofing, exterior details, flooring, drywalling, painting and landscaping took an additional three months. A custom house of this size and complexity would normally take ten to fourteen months to build on site.

*This Old House* and Bensonwood are betting that the Favat house—with its resilient structure, its adaptability over time, its sustainable materials, and its energy stingy efficiencies—will keep the weather at bay for centuries to come.

## **Design**

The eco-friendly home—pre-finished off site and assembled on site—has the look and feel of an old barn, and incorporates many industrial style finishes..

- \* Living space: 3,800-sq.-ft.
- \* First floor: open floor plan: entry, kitchen, bathroom, TV room, sitting area, great hall and computer workspace.
- \* Second floor: two children's bedrooms, each with their own loft, bathrooms, guestroom, laundry room, and master suite.
- \* Basement: increased functionality includes storage, a workshop, media room, half bath, mudroom, and kitchenette.
- \* Kitchen: industrial elements such as black painted cabinets, concrete countertops, and stainless steel appliances.
- \* Other Features: distressed painted wall finishes throughout the home, along with salvaged white oak flooring, neutral colors for walls and carpeting, along with functional materials like concrete for countertops

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## **Building at Bensonwood: Combining The Art of Timberframing With The Science of Prefabrication**

### **Structural:**

As both the architectural firm and prefabricator on the project, Bensonwood built 75 percent of the house in a controlled workshop environment. Entire wall, floor and ceiling assemblies—complete with windows and trim, interior and exterior finishes, and outfitted for plumbing and wiring—were pre-built in the controlled environment of Bensonwood's Walpole NH facilities. The timberframe was created using traditional hand-craftsmanship, and the latest computer-aided woodworking technology, providing a level of structural integrity that will last hundreds of years. The home's components were assembled on site.

\* Prefabrication of all elements, including exterior walls, floor systems, and roofing.

\*Types of timberframe include: Douglas fir, live oak and Eastern white pine rafters.

\*Using massive salvaged Douglas fir quarry timbers, which were taken from a granite quarry in Vermont, and 200 year old USS Constitution class ships' timbers, recovered from the local Charlestown Navy Yard, to make up the main timbers in the home. The ribs and the derrick were both sawn at Bensonwood's own sawmill.

\*Prefabricated foundation made of high strength concrete from Superior Walls. At 5,000 pounds per square inch (PSI), it is higher than a standard foundation and only puts concrete where needed, creating a more efficient wall.

\*Post and shear wall hold-downs to attach the home securely to the foundation. This engineering complies with the newly adopted state building codes, which specify higher design wind speed loads. roof panels/gaskets, cupola roof, boards, and soffit boards.

\* Structural insulated panel roofing.

\* 50 Structurally Insulated Panels (SIPs) fabricated into roof sections that have interior ceilings installed inside and sheathing ready to receive shingles on the outside.

\* Pre-installed exterior window trim and windows. Interior trim is prefabricated at the shop and prepared for easy installation on site.

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## **Electrical:**

Some of the wiring was installed at Bensonwood, however for electrical elements that could not be installed in the workshop, steps were taken to ensure this wiring could be easily connected on site.

- \* Electrical wires run in chases and are disentangled from the structure of the house.
- \* Pre-wiring parts of the building with a new plug and play wiring system.
- \* Installing electrical panels and subpanels, as well as outlets, switches, and their related wiring, at Bensonwood.
- \* Pre-installing chases and wiring for alarm and data cables.
- \* Prepping for on-site connection by using quick-connect devices that allow panelized sections to be completely wired then rapidly connected in the field.

## **Plumbing and Heating:**

The drainage plumbing and hydronic radiant heating can only be installed in horizontal floor panels so when the building is erected on site the mechanical contractors can run the vertical piping to “connect the dots.”

- \* Building a “boiler room in a box,” which contains all piping and hangers to be shipped in one piece to the project site. This box allows for a controlled environment where the temperature and humidity is consistent.
- \* Installing rough plumbing in the bathroom module.
- \* Creating a solar powered hot water system, which features evacuated tubes that are mounted into a manifold and then installed on the south side roof on the project site. These evacuated tubes will work with the solar hot water heater in the boiler room. They have a unique performance characteristic in that they work extraordinarily well in cold weather and on cloudy days. Any excess hot water can be used to supplement the radiant heating system.
- \* Pre-plumbing solar heating system for easy installation of “boiler room in a box” on site.
- \* Maximizing eco-friendly characteristics with solar power system that deliver approximately 65 to 70 percent of the building's domestic hot water load.

Efficiencies for this type of equipment are between 90 and 96 percent.

- \* Insulating walls with closed cell urethane in spray booth.

## **Open-Built®**

Open-Built® thinking takes a layered approach to building, with each layer defined by its life span and anticipated need for future alteration. The high quality homes resulting from this process are built rapidly and with minimal waste. Homeowners can easily move or remove walls and fixtures, access swiftly evolving technologies or adapt the home to the changing needs of the occupants.

## **The Weston Job Site:**

Once the structural components of the house were brought on site from Bensonwood, general contractor Tom Silva and his team from Silva Brothers Construction began to add many of the key finishes indoors and out.

- \* Installing paperless drywall, including fire code drywall in the garage and storage room.
- \* Adding wainscoting, trimboard, and baseboard. \* Laying reclaimed white oak floors on the first floor, modular carpet tile squares on the second floor, and shock-absorbing rubber floor tiles in the basement.
- \* Creating a herringbone tumbled stone entryway inside the front door, and in the garage level mudroom.
- \* Laying handmade Trikeenan tile in the master bathroom and in the two upstairs bathrooms.
- \* Installing custom cabinetry in the kitchen and built-ins for the first and second floors, and in basement media room.
- \* Designing floor tracking for the large, heavy dining room table. This will allow it to be easily rolled into different places in the room.
- \* Creating a platform in the media room that will accommodate four reclining chairs.
- \* Installing ventilation systems in the bathrooms and kitchen.
- \* Putting in the air conditioning system on site. The house will have small, individual units instead of a central system. The bedrooms and other rooms in the house will each have an individual unit, which operate with minimal ductwork in the ceiling. This allows for savings on energy as the units can be individually turned on and off.
- \* Adding hook ups and vents for the washer and dryer on the second floor.

- \* Installing a 3.2kW photovoltaic system (solar panels) on the rooftop that could provide as much as 75% of the Favats power needs.
- \* Hanging decorative light fixtures and recessed lighting.
- \* Applying a natural stone veneer for the interior fireplace wall as well as the exterior chimney, columns, and foundation wall.
- \* Installing maintenance free man-made decking for the two entry porches. The decking is made from partially recycled materials.

**This Old House Crew:**

Host Kevin O'Connor  
 Master Carpenter Norm Abram  
 General Contractor Tom Silva  
 Plumbing and Heating Expert Richard Trethewey  
 Landscape Contractor Roger Cook

**Bensonwood:**

Founder Tedd Benson  
 Architect Chris Adams  
 Project Manager Tony Poanessa

**Project Team:**

Landscape Architects Tom and  
 and Wes Wirth  
 Plumbing Contractor Lynne  
 Keating  
 Master Electrician Allen Gallant

**PBS Premiere:**

Brand new episodes of the This Old House Weston Project will premiere nationally on PBS Thursday, October 2, 2008. (check [www.thisoldhouse.com/tvschedule](http://www.thisoldhouse.com/tvschedule) or your local listings)

**About Bensonwood Homes:**

For more than 30 years Bensonwood Homes has been a leader in the design and construction of high-quality timberframe residences and public structures. An innovator in the timberframing and construction industry, Bensonwood Homes is once again changing the industry through its Open-Built® building principles, an innovative way of designing and constructing buildings, to increase their efficiency, flexibility and variety. Bensonwood is dedicated to building "layered" homes with "disentangled" systems using Open-Built® principles and to educating the public about this new way of building functional, cost-efficient homes.

**Bensonwood Homes and Open-Built®:** [www.bensonwood.com](http://www.bensonwood.com)

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