

Custom Home of the Year: Emerald Star in Seattle, Washington



Some may believe that building an energy-efficient home is a common practice these days. However, sustainable residential builder Dwell Development LLC has taken green building practices to the next level with Seattle, Wash.'s first-ever Emerald Star certified home. The cutting-edge combination of green technology, renewables and reclaimed materials help the three-story, 2,218-square-foot home meet the rigorous requirements for Emerald Star certification developed by the Built Green residential building program.

"The fact that this home is the first certified Emerald Star home in Seattle shows it can be done, and be a profitable and sustainable business model for Dwell Development and any other builder that might want to take on the challenge," said Anthony Maschmedt, owner of Dwell Development.

The home was completed in August 2015, but as a sought-after commodity on the market, pre-sold in April 2015. The homeowners, a small family from Italy employed by Amazon, were looking for a home for quite some time before finding the Emerald Star home. Maschmedt commented, "They fell in love with what we were doing, and we felt they were the perfect fit for us, so we worked out a pre-sale."

Meeting the requirement of the Built Green certification program was no easy feat. The program was developed to establish environmental standards for construction materials, energy efficiency, water use, and indoor air quality. The voluntary program requires builders to follow a specific set of criteria to attain a Built Green rating ranging from three-star, four-star, five-star, or Emerald Star.

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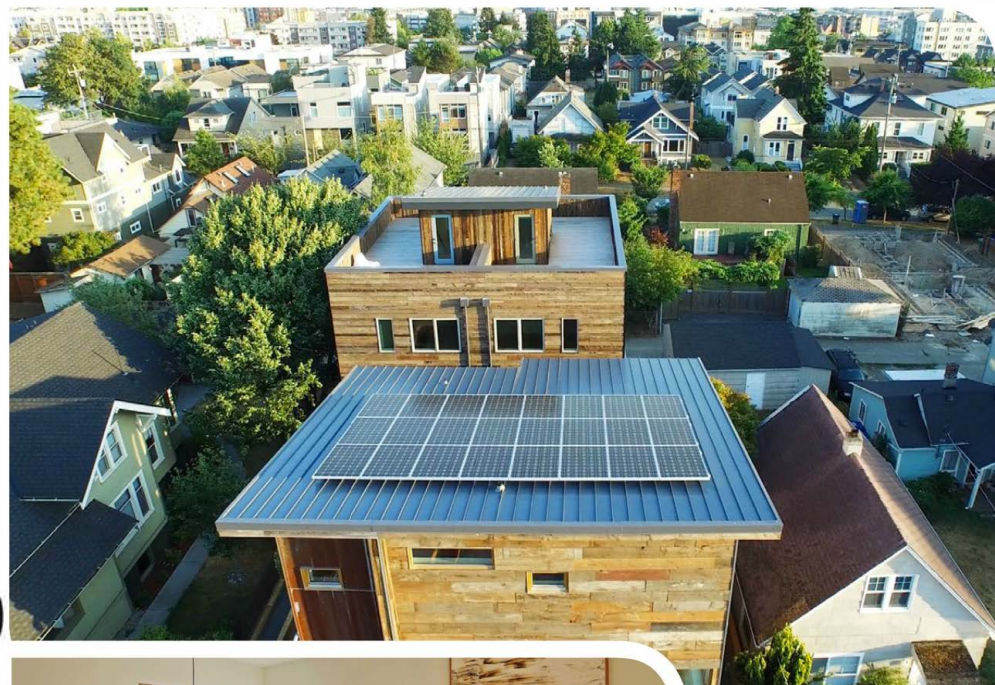
▼ Keith Hammer, principal, teamed up with owner Anthony Maschmedt to co-found Dwell Development.

An Eco-Friendly Urban Dwelling

Residential developer, Dwell Development LLC, is pushing the envelope of sustainable design and green construction in the Pacific Northwest

By Carina Calhoun





▲ The building team carefully configured the roof and window placement to maximize solar gain without sacrificing modern aesthetics.

◀ The inspiration behind the distinctive design is described as “reclaimed modern” according to Maschmedt.

The home’s design is based on the Passive House model, meaning it is designed to be airtight. “The way we do this is not that complicated actually; it starts with applying an airtight barrier on the exterior of the home. Then we install high performance triple pane Passive House windows from Europe. Our 12-inch thick exterior walls are then packed tight with blown in cellulose insulation. We install four inches of rigid insulation under the slab, and our roof system boasts around an R-90 (+). These components give us an insulated air tight home,” explained Maschmedt.

In addition to the home’s low-flow WaterSense fixtures and plumbing, a rainwater catchment cistern was installed to be filtered and used for toilets, laundry, and exterior hose spigots.



Showcasing the homebuilder’s commitment to pushing the envelope of sustainable building, the team installed a 450 percent efficient hot water heat pump from Australia to provide hot water and in-floor radiant heat, “this system is revolutionary for the industry. The Sanden uses 1kW of energy to generate 4.5kW of heat, that’s 78 percent less energy compared to traditional hot water systems. Not only is it better for the environment, it’s better for the homeowner’s bottom line,” said Maschmedt.

Using recycled materials is a key factor of sustainable building practices in any home and there was no shortage of these elements in this custom home. Reclaimed materials were sought-after to adhere to the certification requirements. Maschmedt stated, “All the exterior siding is reclaimed barn wood and metal from an old barn in Oregon that we had deconstructed and brought up here to Seattle. All the old flooring and stairs are reclaimed material from Montana.” The countertops are 85 percent recycled glass and aggregate concrete from a local manufacturer and the cabinets are locally-sourced and along

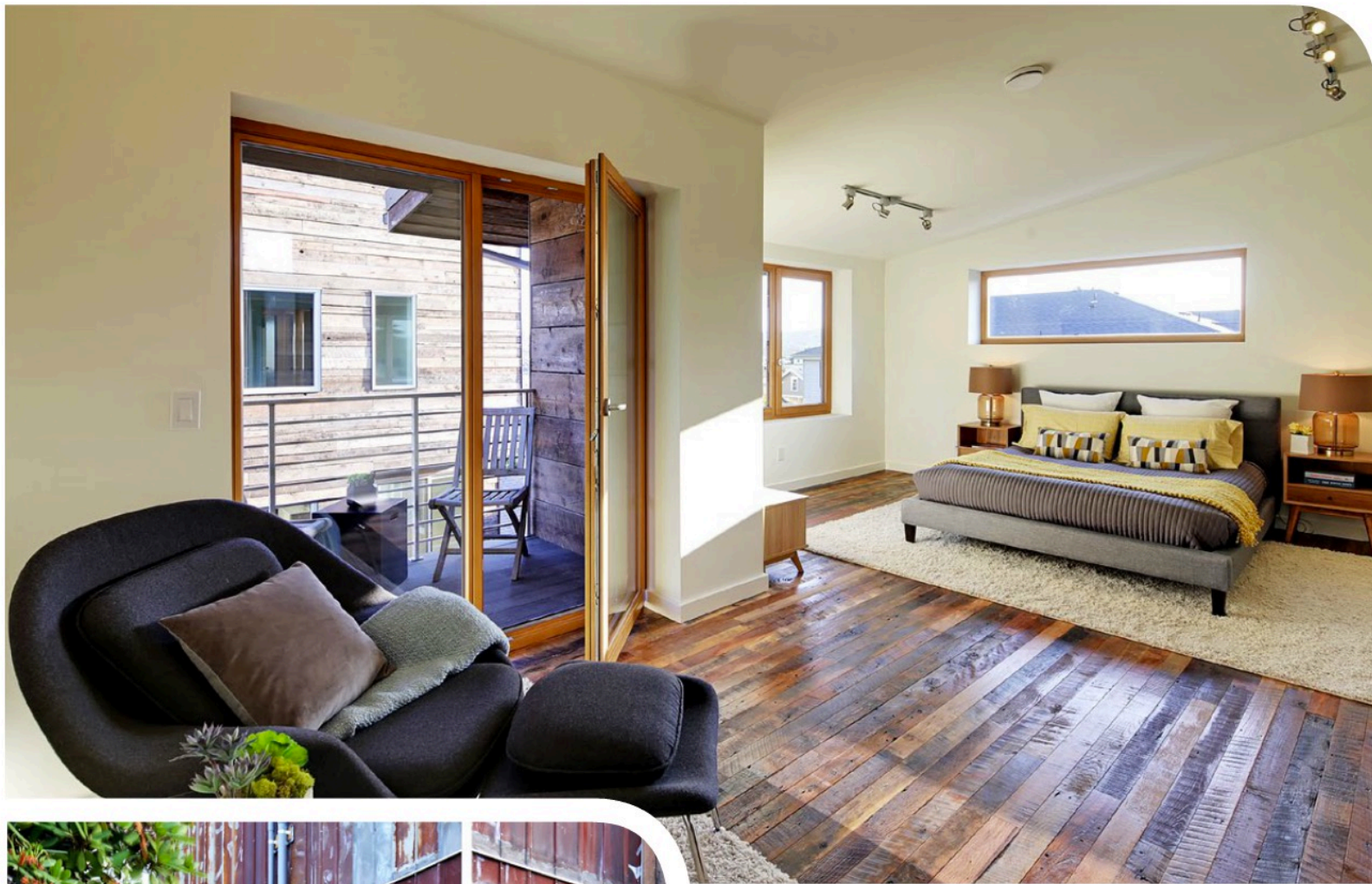
▲ Dwell Development’s holistic approach to sustainable building helps homeowners conserve resources and cut costs.

with the doors, millwork and paint, do not contain any added VOCs. Building an energy efficient home of this caliber requires a smart and strategic architectural layout. Dwell Development partnered with local firm, Caron Architects, to design an eco-friendly home of this magnitude in Seattle’s vibrant Ballard neighborhood. “Working very hard at directing our team of architects at Caron was a pleasure,” said Maschmedt. He continued, “... that synergy created by them seeing our vision, meeting our design criteria and fulfilling our sustainable construction methodology was a really fun process.”

The inspiration behind the distinctive design is described as “reclaimed modern” according to Maschmedt. He stated, “It came from our passion and commitment to sustainable and thoughtful design. The blend of old and interesting materials with the clean crisp lines of modern really work well together.”

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larger window openings without compromising the energy efficiency of the building envelope. Double height interior space at the dining area also helps daylight enter the space. The floor plan feels light and spacious despite the strict requirements,” said Erler.

The urban location fulfills another Built Green requirement—the home must be within a half mile of at least five essential services. This is a requirement meant to minimize the use of cars for everyday errands; but in the case of longer trips, the built-in EV charging conduit is there to support a more sustainable lifestyle.

Dwell Development’s holistic approach to sustainable building helps homeowners conserve resources and cut costs while also setting the bar high for other residential developers. As more and more homeowners are investing in green upgrades, the Emerald Star home comes standard with energy efficient lighting, technology and appliances. Emerald Star certification is the next step for sustainable building and with Dwell Development leading the way, zero energy homes will become the standard.

Project Manager Mark Erler of Caron Architecture described the design of the home as, “A modern, livable space with open plan with areas to congregate and connect.” He added, “The design is guided foremost by the desire to achieve a high level of energy efficiency and Emerald Star status. The aesthetic qualities of the home were born out in the pursuit of this goal.”

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