

A young child with blonde hair, wearing a grey hoodie, stands on the left side of the frame, looking out a large window. A woman with blonde hair, wearing a blue floral dress, stands on the right side, also looking out the window. The window has light blue curtains. The background outside the window is a soft-focus view of a green landscape. The text is overlaid on the image.

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LICENSED ARCHITECT

The Future of Homebuilding

Simple practices for every
family to Build a Sustainable,
Energy-Efficient House

www.avcnllc.com

Revolutionizing the way we approach new construction design, without compromising on comfort or functionality.

In 2022, the U.S. saw a 37% increase in new home construction compared to the last decade, totaling over 1.1 million new single-family homes. This is a testament to the hard work and dedication of builders and developers in creating more and more homes for families to call their own. With the advancement of technology and new construction practices, we can look forward to even more sustainable and energy-efficient homes in the future.

It's true that high-performance practices may have been a fairy tale for most homeowners 5-10 years ago. But today, there is a wide range of building techniques available for homebuilders at every budget. From renewable energy systems to new, sustainable building materials, these easy-to-implement strategies can help you create an energy-efficient and comfortable space without sacrificing design or lifestyle preferences. Just like sneaking kale into your smoothie.

The Importance of Mindful Building Practices: Ensuring the Safety and Health of Our Homes

It is crucial to be aware of the materials used in construction and their potential effects on our health.



From the lessons learned in the past with asbestos and lead paint, to more recent studies on the potential harms of volatile organic compounds (VOCs) found in common building materials like paints and carpets, it is essential to consider the impact of these materials on our homes and the people who live in them.

The 2016 report from the Harvard T.H. Chan School of Public Health highlights the importance of being mindful of the materials we use in our homes and the potential impacts they may have on our health, and it is important to continue to research and improve building materials for a healthier and safer living environment.

From wiring and insulation to flooring, lighting, caulking, sealants, paints and more - we have an unprecedented opportunity to move forward in our building practices in a way that prevents toxic materials, including asbestos, formaldehyde, chromate copper arsenic, VOCs and PVC - all of which are harmful to our bodies and to the environment.

Green is the New Black: Achieving Sustainability in Building Practices

Discover a revolutionary new way to live sustainably. By making conscious decisions about how you construct, you're taking steps towards an environmentally friendly future.

The Exciting Possibilities of Green Housing: Affordable and Design-Flexible Options for a Sustainable Future

There may be misconceptions that "green housing" and other similar terms such as "eco-friendly", "healthy house" and "sustainable" are synonymous with high costs and restrictive design. However, these terms simply describe a method of building homes that are energy-efficient, comfortable, and healthy, while also reducing their impact on our environment and the health of those who live in them. With increasing awareness and technological advancements, it is now possible to have affordable and design-flexible options for sustainable housing.

Luckily, a new wave of architectural inventors is rethinking construction practices to support sustainable solutions - without sacrificing comfort or space. With modern technologies more readily available such as Hempcrete, Green Roofs, and a whole slew of passive, high-performing efficiency models – there is no excuse now not to consider green building techniques when constructing your dream home.

Setting the Sustainability Stage: High-performing building envelopes

In a nutshell, the building envelope is what separates the outside environment from your internal living space. It's composed of walls, ceilings, floors, and windows - with insulation providing an important layer of protection between the inside and outside worlds.

High-performance building envelopes provide a tighter seal that keeps conditioned air in while filtering out pollutants like dust, pollen and mold spores.

This helps to improve indoor air quality while ensuring less energy is wasted on cooling or heating.

Innovations in materials like Hempcrete can also help you create a breathable structure that doesn't rely on highly toxic elements to function properly. Hempcrete is actually carbon negative!! You could build a house that REDUCED the amount of carbon in our atmosphere! Wouldn't that be cool?



James Pastine, Project Manager and Designer at Crawford Architects in Kansas City, Mo., believes the design of the building envelope is critical for providing occupants with an optimal environment. He argues that these envelopes must be designed to combine both skin components and openings to maximize their impact on lighting, heating or cooling needs. Ultimately, "the key is getting those two elements to coexist harmoniously," he states—creating a high-performance space for users of the building as a result.

Choosing the Right Building Materials

The next step to achieving sustainability in homebuilding is to use sustainable materials that have the least environmental impact and the greatest longevity.

Building with these materials will reduce fuel consumption, energy costs, and pollution from the production of building materials. And, as we've already said, will reduce the toxicity of the materials that are around you every single day.

Sustainable materials like bamboo, cork, cellulose insulation, and photovoltaic panels are some of the best materials available.

Renewable Energy through Zero Net Ready Homes

Investing in a Zero Energy Ready Home (ZERH) has the potential to reduce energy usage by up to 90%! To maximize efficiency, important aspects such as insulation, air sealing, advanced windows and HVAC systems, and renewable generation should all be taken into account. With ZERHs you can have peace of mind that your home is efficient while helping our planet at the same time.

Not only does ZERH create a homely atmosphere, it also helps cut back on energy costs while increasing the value of your property. Additionally, these homes are highly flexible and ready for future alterations such as introducing electric vehicles or battery storage if desired.

In addition to using sustainable materials in construction, it's important to use technologies that enhance energy efficiency. Passive solar design allows buildings to naturally heat themselves through their design and orientation while the installation of photovoltaic panels on roofs enables homes to generate electricity during hours of peak sun.

The ECHO Solution to Sustainable Houses: Your Resource into the Science of Sustainable Design

A lot of the new “healthy house” models out there don't factor in the cost in comparison to the real value and gain for the homeowner. Throwing money at the problem and “hoping” to solve it doesn't actually prove anything.

Here at ACVN Architects, we have a specific method of energy modeling, running experiments that help us stay budget conscious with our clients. By applying building science and analyzing all the factors that affect the design to provide the best solution, our clients are seeing life-long benefits.

While you're picking paint colors and furniture, we'll be working on the fine points that are deserving of your future. That's why the Echo Framework™ of Architectural planning works:

- Phase 1: Engagement
- Phase 2: Creation Concept™
- Phase 3: House to Home™
- Phase 4: Ongoing Build Support

ECHO makes it easy to look at all the potentials, without compromising the details that make a build special.



Setting yourself up for life - planning your next building project



Master Architects Dugan Caswell, Andreina Verdesoto and creator-in-training, Abigail

With so many advances in green building technology, there is no excuse not to consider sustainability when it comes to homebuilding. As consumers, we must become more aware of the health impacts and environmental damage caused by traditional construction practices.

From Energy Star Appliances to geothermal heating and cooling systems – it's time to join the sustainable revolution and embrace green energy-efficient building practices. Let's make sure our homes are built for today, tomorrow and beyond - for a better future for all of us!

Schedule a Free Consult to Get Started

Your house can give you the life you dream about for you and your entire family, so you can enjoy all of life's moments.

With an Echo framework design from ACVN, you can focus on what's most important to you... whether it's an addition, a house off the grid, the perfect piece of land or the home you're dreaming of for your grandkids... you can love where you live.

Go to acvnllc.com to schedule your consultation.