

Green Design, Smart Communities

Non-profit Ecology House of Indianapolis offers new vision for sustainable urban living – Anne Laker

Architects Tom Gallagher and Sam Miller are looking for a new language. The term “green architecture” — typically defined as energy- and resource-efficient buildings — doesn’t come close to expressing the holistic picture of the ideal urban living spaces these two men envision. Attuned to the cultural dimensions of architecture as well as planet-friendly innovations in bricks and mortar, Gallagher and Miller articulate a tantalizing alternative for anyone concerned about suburban sprawl, cheap and soulless construction, poisonous materials, decaying neighborhoods and squandered natural resources.

Instead, they imagine villages that make use of “smarter” building materials: adaptable, renewable and non-toxic. These urban villages respond to what’s authentic about our place, from its climate to its flora. The sustainable urban village restores the balance between people’s needs and available resources through great design.

Miller is an architectural engineer with CSO Architects, and president of the board of Ecology House of Indianapolis (EHI), a non-profit with a transcendent vision: to educate planners, builders and citizens about the relationships between urban design and the environment in Indianapolis. Miller and Gallagher, EHI executive director and landscape architect, both Ball State School of Architecture and Planning alumni, hope EHI will be a laboratory for sustainable solutions for community development and residential design with a higher level of integrity. Ecology House is based in Fountain Square, but the first actual ecology house is under construction at 2172 N. Pennsylvania (see sidebar).

To listen to Gallagher, 33, and Miller, 45, tell it, sustainable design is not just the right thing to do; it’s an economic opportunity, and a refreshingly zen approach to community planning that responds to abiding human needs for privacy, relationships and well-being. Why can’t Indianapolis be a laboratory for testing ideas about what makes a city a great place to live?

NUVO sat down with Gallagher and Miller for a challenging conversation about creating a new urban sense of place.

NUVO: How does green architecture relate to the latest thinking about sustainable communities?

SM: We are actively engaged in exploring the potential of Indianapolis, and asking questions like, can we continue to rely solely on the automobile for transportation? There are huge implications if we try to reframe the working of the city so that citizens have more transportation choices that are appropriate to place and length of trip. Also, about 40 percent of our economy is based on buildings and infrastructure. There’s only so much energy and money available in the system. We can squander our economic resources, or look for ways to create a quality of life that resonates for everyone, respecting all income levels.

TG: Green architecture is about quality of life. But it’s only a piece of the larger whole of sustainability. Unfortunately, green architecture gets the billing because it’s easy to see, but it doesn’t attend to the “sense of place,” which is what it needs to be authentic, to be a place that people love. A building must say something to you and mean something to you.

SM: The value of good design is that it reinforces the relationships among people and the love of place.

TG: Sam and I struggle with words like “livability” and “sustainability.” We are literally on the hunt for a better way to describe what we’re talking about. Livability and sustainability imply a minimum. How long can we sustain our use of this particular resource? We need to use a term like “living” or “sustaining,” not sustainable.

This is so big that we’re looking for a new language. We are sitting in a new milieu.

NUVO: What will it take for Americans, and Hoosiers, to embrace change? We take a lot for granted, and we’re hooked on disposability and convenience.

SM: We are a young culture, shaped by our history and now, literally, by our technologies. We respond to opportunities in technology, such as the automobile. The car has obviously had a fundamental impact on how cities are built. Indianapolis developed under the influence of the auto. “Separation of uses” (i.e. driving to the suburbs to get to Wal-Mart) reinforces the impetus for people to get into their cars. Lots of people care but nobody knows what to do. People’s livelihoods are at stake. We’ve had four or five generations of people whose lives revolve around cars. We like to ask outrageous questions like: What would the city look like without automobiles? Let’s start experimenting now with what we know is successful, then adapt it to this place, time and culture.

TG: We build our values whether we are conscious of it or not. The recent popularity of feng shui reveals our desire to be connected to more than just having shelter, or even beauty. When we design we need to think about the whole system of systems at the same time, human and non-human.

SM: We find ourselves in a place I call the invisible; things we can’t immediately see: energy and relationships. Our senses only give us so much information. We are surrounded by an enormous variety of energies, shaped by all we build, our technologies, and so on. One fundamental value is to cultivate a long view: 50, 100, 500, 1,000, years. What should the city look like 500 years from now?

TG: It’s the “seven generations” idea. People once put their names on a building to establish a legacy. Throughout history, placemaking has been sacred work. Now it’s an economic act. Creating community is important enough that people used to make builders the “trustees of the invisible.”

NUVO: How did Ecology House of Indianapolis emerge?

SM: Kristi Seastrom, Ed Cohen and Gary Davis founded Ecology House in 1992. We want to educate people about sustainable design for houses. A house is representative of a tiny community system. We want to be a lab that works with the city on transformation. I’m interested in changing the way Indianapolis works. It’s not solely about greening buildings. That’s only part of the solution. It’s thinking of cities as organisms, as living things.

TG: We are working to make this make sense to people. Fact is, everyone wants to live well. Ecology House is not just about changing your own everyday life — you can have a green house — but we hope it will be extended to green neighborhoods. Our goal is to give people real solutions and ideas. Such as, here’s what you can ask CP Morgan to do in order to be greener. People can work with builders. In historic neighborhoods, the conversation is often about style. We are already handicapped in attempting to emulate a bygone style. The question should be: How is this house authentic to this place at this time?

SM: Eco House is not about fashion, it's about fundamentals. Most suburban builders respond to the existing systems and have clear-cut strategies for proceeding in the marketplace for short-term gain.

TG: A new kind of urban village is being demanded across the country. Builders and developers must be willing to change their product. Ultimately everybody wants to do the right thing. Ecology House wants to show a better way.

NUVO: How are other cities thinking about these issues?

TG: Many cities are dealing with the results of their shortsightedness. Modern suburbia is an example of how cities are not thinking about these questions of diversity, density and design. Cities like this end up building a monoculture and find themselves in awkward situations. For example, these so-called neighborhoods are not only limited to a single use, they are most often divided along economic lines. Families who migrate to "upscale" residential developments often find that their children, upon their return from college, are excluded from the communities in which they grew up because of their income level.

NUVO: What would the perfect urban space consist of?

TG: For a place to sustain us it needs to have five basic elements, each relating to a level of interaction with the world. The first is home, the most intimate space. The second is places like coffee shops or parks, where you gather with friends in a public setting. The third is the workplace or marketplace. Fourth, the commons, the places where you gather with relative strangers to watch fireworks or enjoy the arts. Lastly, there are private spaces that nurture our connections to the universal and the sacred. While these examples are suggestive of a good mixed-use village environment, the same elements can be applied at the scale of a neighborhood, a city, a region or even our own homes. Once we have a handle on the elements and the scale, we need to consider the form and organization. Too often these are thought of as simple aesthetic or stylistic issues. A sustaining place, however, must have a more authentic base, anchored in the cyclical relationship between the choice of methods and materials used, the environmental fit of the structures built and the expression of the local culture and traditions. Simply copying a certain style is a pale imitation of thinking authentically. Ultimately, you should be able to ask of a place: What does this place say about who I am, how does it express my values? What does this have to do with the Indiana landscape? What's appropriate for here?

SM: We might ask, how will we know when we've succeeded? When people choose to come back to Indianapolis over time, and they know why they want to come back. There are tremendous business opportunities within that question!

TG: I believe in the potential of people. We Hoosiers can do it. Let's not lose faith in Indiana. Let's think of ourselves as being able to make it. We tend to be a reactionary economy. But guess what, there is a Georgia company that makes carpet out of corn. Why haven't we thought of that? Let's make something creative out of our resources. It's better than farmers being paid not to grow corn. These changes take deliberate choices. What about our Indiana heritage of building and testing cars? Let's position ourselves to be a worldwide provider of transportation services. Where is Indy on this thinking and where does it need to be?

The Perfect House

Is it possible to lust after a building? Is it possible to look, often and for long periods of time, at a floor plan, as if it were a centerfold? Could it be that aerated, recyclable concrete can be ... sexy? Most definitely. The Perfect House, as its makers have confidently dubbed it, will soon be done. "Perfection" assumes purity of form and sublimity of function. The 2172 N. Pennsylvania home in Herron-Morton will be sublime down to its water-stingy toilets.

Modest, efficient and affordable, the Perfect House is the work of volunteer construction professionals eager to showcase what is possible with smart residential design, without showboating. "It'll look like any historic house," says architect Sam Miller, "not like it just landed from Mars." Miller's high on proving that green design is not funky, not remote, not hard to achieve. It can be the status quo — a better one.

Cosmetically, the home is based on a historic design "adapted for today." It's 1,600 square feet with three bedrooms and two and a half baths. Features include:

- A front porch to facilitate neighborliness
- Native plants instead of a lawn — less need for cancer-causing herbicides
- A barrel to collect rainwater for watering the plants
- Location within walking distance of banks, cafes and daily needs to reduce ozone-producing car usage

In terms of construction, the home incorporates innovations the layperson might not notice, but can surely appreciate:

- The foundation and walls are made of autoclaved (steam-molded), aerated concrete made by Florida-based AERCON Industries, which is donating the materials. This is concrete with a high IQ. It's recyclable, fireproof, insulative (warm and snuggly), insect-resistant, sound-absorbing and does not off-gas nasty chemicals (The mouth waters).
- Interior designer Liz Coles of IUPUI is using recycled carpet, energy efficient lighting and appliances, natural finishes and paints and stains that don't emit volatile compounds.
- Hardin Geotechnologies, Precision Comfort and Ortman Drilling and Water Services are donating a geo-thermal water furnace and system that's 60 percent more efficient than gas, and handles heating, cooling and hot water needs, all in one.

Miller used an energy modeling software that predicts energy usage in the house, "so we can get a sense of how much money it will save on utility costs over time due to its efficient design. It should be at least 30 percent more efficient than comparable standard construction." The payback is half the fun.

When complete in mid-October, the Perfect House will be open for eight weeks of tours and open houses for the public, the media, neighborhood associations, architects and builders. Proceeds from the home's sale, after expenses, will be donated to Keep Indianapolis Beautiful and Ecology House of Indianapolis.

"This is one of the first buildings in our community to follow the green design rubric of energy efficiency, resource efficiency and healthy materials," Miller says. "Green building is about embedding intelligence into the design process, and thinking in terms of systems, not isolated components." The foresight embedded in this kind of integrative thinking makes it doubly delicious.

To anyone happily seduced by the idea of the Perfect House, Ecology House of Indianapolis offers resources that can be shared with conventional builders, renovators and architects. For more information, contact Tom Gallagher at 414-4937.

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