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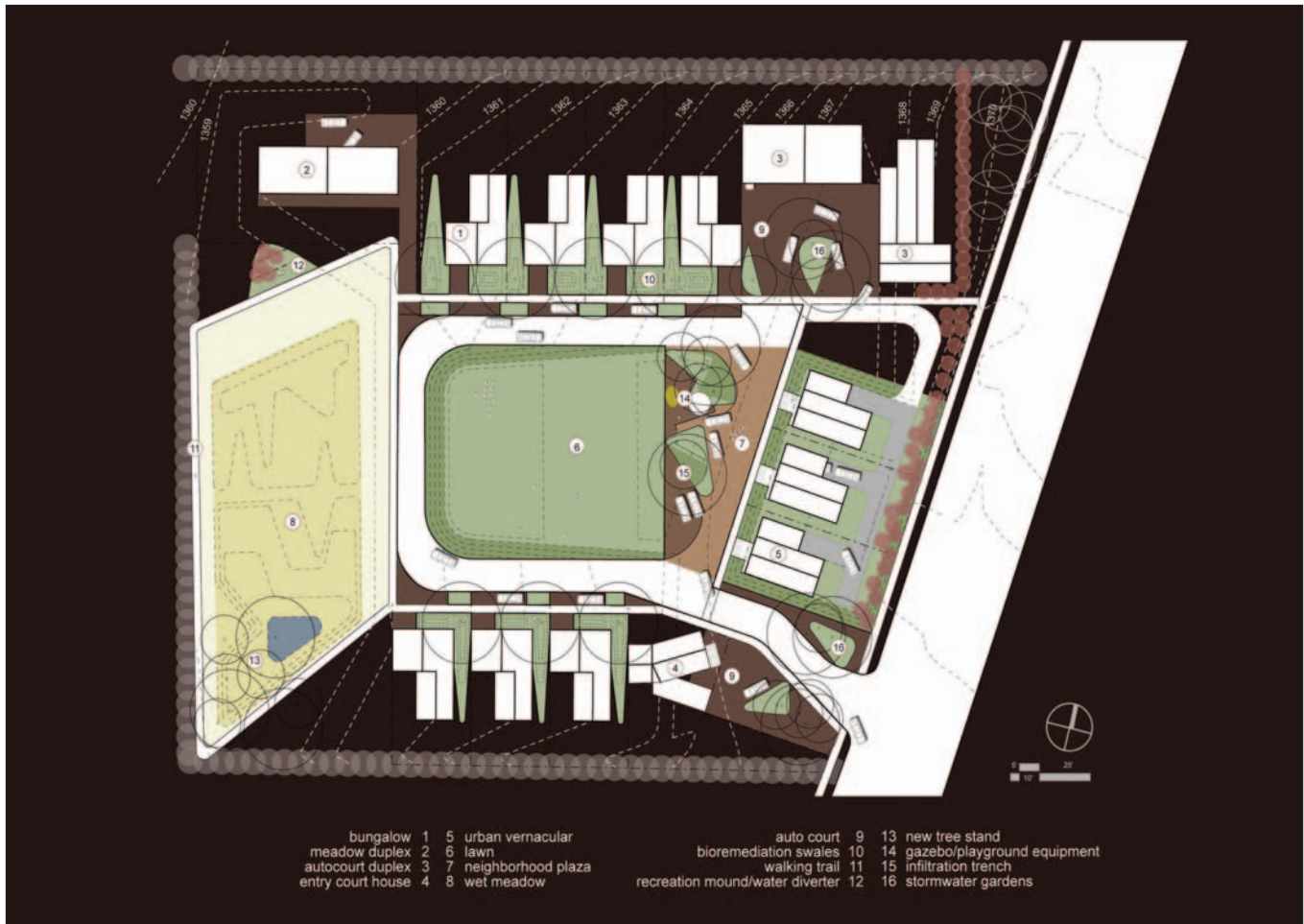
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# Habitat Trails—Rogers, Arkansas

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For socially and environmentally conscious designers, every new plan to build on a greenfield site should beg a fundamental set of questions: Should we be building on such undeveloped sites at all? Are there more resourceful solutions, such as urban infill? How can we reconcile the act of building with a broader responsibility to keep the social and environmental costs of new development in check?

These are tough questions—none answerable by any single project. But as this winner of a Place Planning award shows, there are concrete ways to move—and build—out of this ethical dilemma. The key may be to develop in ways that look beyond simply minimizing a project’s own

ecological footprint and, instead, seek to substantively improve the larger physical and social landscape.

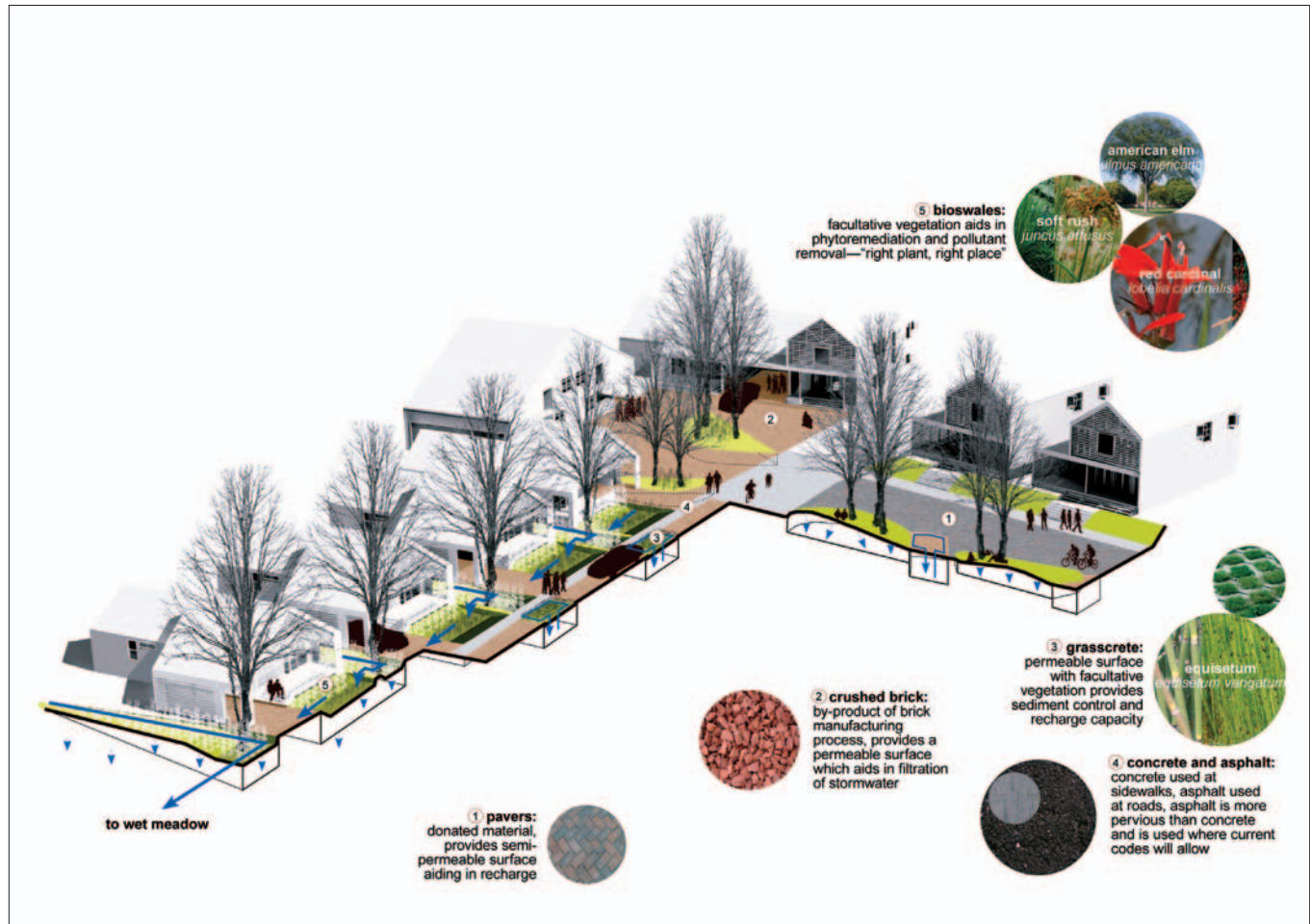
The plan for Habitat Trails clusters seventeen new homes on a five-acre former agricultural site in Rogers, a city of 40,000 in northwest Arkansas. As the first “green” residential development in the state, it paints a convincing picture of how a new development on previously open ground can do this.

The project involved investigation of four target fabrics: open space, green streets, hydrology, and vernacular house typologies. It proposed mechanisms to retain and treat all storm runoff on site; it set aside significant areas as common open space; and it offered schematic proposals for seven house types that could be built within a limited construction budget of \$55 per square foot.

The jury chose the project, submitted by Stephen Luoni, director of the University of Arkansas Community

**Above:** Site plan for the Habitat Trails development.

**Opposite:** A system of green streets and pervious surfaces will slow runoff and reduce the flow of pollutants into streams and lakes.



Design Center, because of its resourcefulness in weaving together the built and hydrological landscapes, its innovative adaptation of vernacular house typologies, and its commitment to pushing local government to adopt important modifications to existing sprawl-inducing zoning codes.

### Treading Lightly, Cutting Deep

The client for the project was the well-known nonprofit housing developer Habitat for Humanity. Founded in 1976 by Christian missionaries, Habitat chapters around the United States and overseas build homes for the working poor through a program of donations, volunteer labor, and sweat equity by prospective homeowners.

The work of the Benton County, Arkansas, chapter had recently been stymied by increases in local land values, however. In effect, it had been priced out of local real estate markets by private developers who had been carpet-

ing the area with standard 200-to-400-house subdivisions, presumably in response to the opening of Wal-Mart's corporate headquarters in neighboring Bentonville. Debbie Wieneke, the chapter's executive director, eventually realized the chapter would need a new approach if it were to continue its mission to build affordable homes.

In a recent interview with the University of Arkansas student newspaper, Wieneke explained how the new project takes the chapter's effort to a whole new level. "Normally we have one simple home on one lot," She said. "Now, boom: we're going to put 17 families on five acres with a wetlands area in one corner, a neighborhood park in the middle, and a vast variety of plants, trees and landscaping that we've never had an opportunity to do before."

If Wal-Mart is to blame for pricing Habitat out of the local land market, the multinational retailer can also be credited for helping it get back in. It provided the largest



single donation for Habitat Trails—\$200,000—enough for Wieneke to buy a site for the project from Benton County. Wieneke then relied on Habitat’s national philanthropic network and donations from local small businesses to raise the \$1.8 million needed to build Habitat Trails.

According to Aaron Gabriel, Assistant Director of the UACDC, not only are the site’s seventeen homes clustered in a U-shape around an expansive “neighborhood lawn,” but most of the western edge of the site is given over to a newly

graded wetland largely intended to intercept and treat storm runoff from neighboring development. In all, more than one-third of the five-acre site is given over to these remediation areas which, in effect, act like giant sponges.

“Statistics say that stormwater has a contamination level twice that of raw sewage in the first half hour after it hits the ground,” Gabriel says. “By creating the infrastructure for bioremediation on this particular site, we are actually providing a hydrological service—which means improving water quality—for the whole city.”

The plan contained a number of other features designed to achieve these ends. Bioswale corridors, or gently sloped

**Above:** The autocourt house type integrates its porch with vehicle parking.

## Sample Jury Comments—Habitat Trails

**Kelbaugh:** Here’s a case where the architecture is traditional but it is a little bit inventive. It’s fresh, not cloying. These are really clever little porches, and the horizontal lattices give it a more contemporary feel.

**Hull:** Absolutely.

**Kelbaugh:** And this is the most interesting morphological survey I’ve seen of porches.

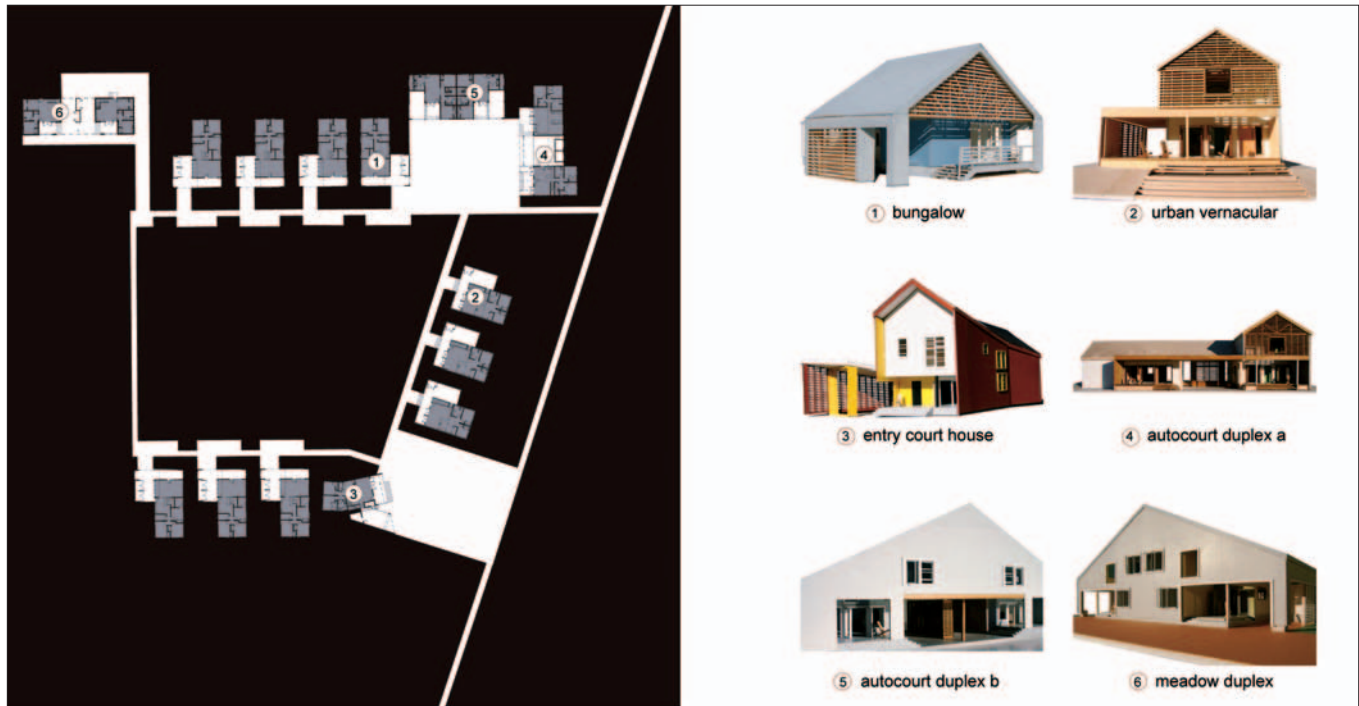
**Ahrentzen:** But I couldn’t figure out what they were trying to do with that study.

**Kelbaugh:** It’s not social. It’s strictly morphological—a real tour de force. And every one of them has a different sort of porch, a contemporary interpretation of these older porches. It’s normative and inventive. It’s also a pretty good little plan.

**Jones:** I thought the novel thing is, as far as I know, Habitat for Humanity never really deals with site aspects. So here they were trying to bring together the building and the land.

**Kelbaugh:** Finally, a Habitat project that adds up to more than the sum of its parts. I think this is the most amazing Habitat project I’ve ever seen.





areas filled with vegetation to aid in the removal of silt and pollutants, are located adjacent to houses, and double as front and side yards. Infiltration trenches and stormwater gardens add variety to streetscapes. And its streets are paved with pervious material—crushed brick and alternating patches of grass—that add color and texture to the project while slowing the flow of surface water.

The idea was to treat stormwater runoff “as a resource, not a liability,” Gabriel says—and in the process, create a new model for the relationship between architecture and infrastructure. The integrative approach also means adding to the city’s recreational amenities, since both large reme-

diation areas on site double as neighborhood parks.

Inspired by Wendell Berry’s adage that a “good solution in one pattern preserves the integrity of the pattern that contains it,” the plan was also cost effective. At a modest price of \$250/linear foot, Habitat Trails’ stormwater management system costs about half that of a standard curb-gutter-pipe solution.

**Above:** Designs for housing typologies based on vernacular models are a key feature of Habitat Trails.

**Ahrentzen:** But I don’t think about it as the one about porches. This is a way to make an architectural statement on a really plain house, I agree. But what impressed me was the multiple layering that they are doing and the ecological orientation. They are trying to create a small neighborhood prototype for doing that.  
**McNally:** I have a masters student who looked at two Habitat projects in Oakland and was interested in sustainable design. She wanted to do a pattern book of

some sort, and try to understand how people who live in those units would be willing to modify their sites. This would be perfect for her.

**Kelbaugh:** Too often pattern books are so literally historical. This is a breakdown of that.

**Ahrentzen:** Also, this is really site specific, going back to the nature of place.

**Hull:** For me, there were two sides to this project. One was this idea about solving issues of surface water

and runoff. But I also liked the sense of community it gave, combining sustainable ideas and social ideas. I don’t see the porches as being superficial. They have social content and solve some things about shade and outdoor spaces. I also thought they were a great binder for the project—rather than all roofs shall be this, or whatever. I thought they put a couple of really good ideas together.

## Porches for Humanity

Following Habitat protocol, Wieneke and her colleagues will choose Habitat Trails' resident families from a pool of local applicants based on financial need and the ability to make required low monthly mortgage payments. Eleven of the families will occupy three-bedroom single-family homes, and six will move into two-bedroom homes in three duplex structures. The size of the homes range from 1,100 to 1,400 square feet.

The designs for these houses were based on a series of models derived loosely from local vernacular prototypes. The innovative nature of this adaptation process was praised by several jury members. What you don't see at Habitat Trails is the romanticized historicism of houses at Seaside or Celebration; nor is there any sign of tongue-in-cheek post-modernism. The UACDC team instead concentrated on reviving an architectural type: the house with a front porch.

Design research included detailed analysis of historic American porch traditions, and *Porches*, a tidy 76-page publication accompanied the Habitat Trails submission. It studied some seventy porch types in morphological terms, as the interface between private and public space, where "each realm is projected onto the other." It also discussed porches in terms of their social value in the American South as meeting area and places for the display patriotism and wealth.

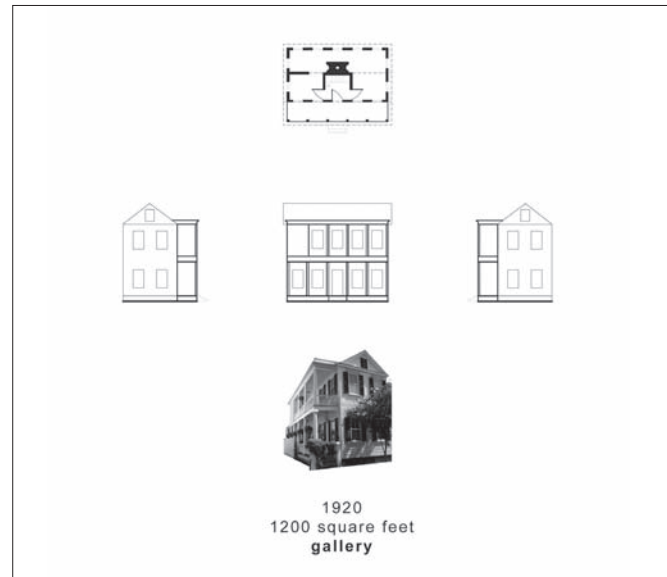
The plan was not explicit as to how the study informed the design of Habitat Trails—except for the obvious fact that each house includes one. Depending on the prototype, these are either rectangular or L-shaped, and made of slatted wood to provide shading and privacy.

But the most innovative aspect of the porch-houses is that even though they harken to traditional modes of encounter, they maintain a welcoming attitude toward that most elemental symbol of American modernism: the car. In the "autocourt duplex," for example, the porch frames two covered parking spaces, increasing its public/private zone. Thus, when the parking spaces are not occupied, the porch and parking spaces can act as one big space that encourages social interaction.

## A Concerted Effort for Change

In developing the project, Luoni and Gabriel's team of twelve architecture students collaborated with the University of Arkansas' Ecological Engineering Group and Division of Agriculture, as well as industry consultants.

Their most prized collaborator, however, may have been their lawyer. By annexing the land and rezoning it for residential use—just in time for groundbreaking last April—the City of Rogers showed clear support for Habitat's new clustered subdivision model. But according to the *Rogers Home-*



*town News*, the Habitat team requested dozens of changes to city zoning codes, and a total of 34 were finally approved.

In most cases the changes were required to increase the compactness of the project and decrease its environmental impact. For example, to slow traffic and decrease runoff, a change was needed to allow interior streets to be twenty feet wide rather than the standard thirty. And although such changes have only been approved on a conditional basis, the city has agreed to consider formally incorporating them into their codes if they prove successful at Habitat Trails.

"Rogers was ready for a new idea," Gabriel says. "We illustrated the project in a way that the city thought made sense. Ours was a model that committee members could really get behind."

"It helped a lot that we were working for a nonprofit developer," he adds. "It was clearly not a situation where we were asking for variances to increase profit."

Over the next year, seventeen families will move into the houses at Habitat Trails. But a wider public could ultimately benefit. While it may not provide a comprehensive alternative to greenfield development in Arkansas, or Benton County for that matter, Habitat Trails represents a collaborative effort to raise awareness of the importance of socially responsible design.

—Julie Kim

All images courtesy of University of Arkansas Community Design Center

Above: The work included detailed research into historic porch typologies.