INNOVATION IN BUILDING TECHNOLOGY FOR AFFORDABLE RURAL HOUSING

4 Small Size, Big Results: Tiny Houses in Hale County, Alabama
8 Cargo Containers Become Simple, Decent, Affordable and Energy-Efficient Homes...It’s Happening in Kentucky
22 From Tornado to Sustainable Community in Saint Peter, Minnesota
Dear Friends,

Some of the most successful approaches to affordable rural housing were once innovations. In the 1960s, for example, mutual self-help housing was such a departure from usual practice that USDA was reluctant to finance it, despite its basis in long-established rural traditions like barn raising. By 2015, when the department celebrated the program’s 50th anniversary, 50,000 USDA-supported self-help homes had made homeownership possible for people with incomes too low to afford a house any other way. Of course, not all innovations have been equally successful, but this issue of Rural Voices magazine looks at some that seem promising.

Among the tactics described here is one derived from the way many low-income rural Americans have constructed their homes piecemeal: start with a very small but high quality home that provides the basics, and then add on over time as finances allow. Tiny houses in Hale County, AL, for example, offer one or two bedrooms as well as a living area, kitchen, and bathroom in 400 to 850 square feet. The homes are livable, affordable, and also expandable. MiCASiTA homes in the Rio Grande Valley of Texas are similarly designed for eventual additions.

Energy efficiency and construction costs are also targets for innovators. Alaska Community Development Corporation worried about the added construction costs of increased energy efficiency, but has discovered the long-term affordability benefits are worth the upfront investment. Low utility costs, as well as low initial costs, are important for very low-income Kentuckians living in retrofitted cargo containers and for families purchasing high-quality manufactured homes through Next Step.

Thinking ahead leads to some affordable innovations. The town of St. Peter, MN provides an example of forethought bringing improvements – affordable housing and new community infrastructure including broadband internet access – from disaster. Organizational planning and management improvements are addressed in this Rural Voices issue as well, with an article about the basics of the “lean” process improvement method.

Building decent, affordable housing for the lowest-income rural Americans requires creativity – in financing, design, planning, and even in administering organizations. We hope the examples in this Rural Voices issue are helpful, and we encourage readers to share other innovations as well.

Sincerely,

Andrew Bias
Chair, Board of Directors

Peter Carey
President, Board of Directors

Moises Loza
Executive Director
Dear Friends

Small Size, Big Results: Tiny Houses in Hale County, Alabama
Tiny homes, from 400 to 850 square feet, can provide decent, affordable homes for rural Americans with very low incomes, while blending beautifully into existing communities.

Cargo Containers Become Simple, Decent, Affordable and Energy-Efficient Homes... It's Happening in Kentucky
Abandoned cargo containers are converted to highly energy-efficient, simple homes for extremely low-income Kentuckians.

Kicking and Screaming All the Way to Greater Energy Efficiency
After hesitating to adopt new construction techniques and add costs, Alaska CDC staff have concluded increased energy efficiency is worth it for homeowners.

Factory-Built Housing as an Affordable Housing Solution
Modern manufactured and modular housing options can serve as an affordable alternative to site-built structures.

From Tornado to Sustainable Community in Saint Peter, Minnesota
After a major disaster, intensive planning and community-wide innovation produced new affordable housing as well as improved electricity and broadband service.

The Basics of Process Improvement for Affordable Housing Organizations
New ideas that improve project management can pave the way to an efficient and organized affordable housing process.

Doubling Down in a Time of Uncertainty
As advocates for affordable housing face the uncertainties of a new Administration, it is clear that our work and our partnerships have never been more essential.
Small, low maintenance, energy-efficient, and built at low cost – these are the key characteristics of the tiny affordable homes my nonprofit, Hale Empowerment Revitalization Organization (HERO), develops. Hale County, AL is known for its unusually high rate of disabled residents, about one in every five working-age individuals. Most of them worked in agriculture or manufacturing and did not receive pensions, so they rely on federal Supplemental Security Income (SSI). In 2016, an individual on SSI receives a monthly income of just $733. HERO’s goal was to produce homes that people with these very low incomes could afford to purchase.

**Fitting into Communities**

HERO’s tiny houses range from 400 to 850 square feet, with an average of 600 square feet. They are intended to allow for expansion so homeowners can add more space as their finances allow. Even at this size, they are able to blend into their communities, and we have made several choices to increase community acceptance of tiny homes. For instance, we put white clapboard siding on many of
the tiny houses so they blend in with their neighbors. For the same reason, generally our homes are renovations rather than new construction.

Currently, we’re working on renovating an old deteriorating house to turn it into three connected tiny houses. From the street, the building will look the same as always, but renovated. Parking and three separate entrances will be at the back of the building. The community is comfortable with this kind of development because it improves the area without changing its appearance.

Zoning laws can be approached creatively as well. In some communities it works best to call these single-family homes. In others, a cluster of little houses can be designated as multifamily housing. Most city council members in Hale County towns are over 80 years old, so I have learned to describe groups of tiny houses as resembling motor courts from the 1930s. They are familiar with the image of one-room individual motel cabins grouped together, and willing to live near such places.

Often HERO is creating a tiny house from a substandard structure. Even when we build new, we construct only where infrastructure is already available, as a way of keeping costs down.

Energy efficiency is important for affordability, too, and our homes also need little or no maintenance. Whenever possible, future residents work alongside the construction crews and volunteers in order to learn how things in their homes work.
Financing Small Homes

HERO finds designers from sources such as universities, architect interns, and AmeriCorp volunteers. We have a unique resource close at hand in Auburn University’s Rural Studio, located in Hale County. The Rural Studio has developed a line of “20K Homes,” intended to be built for $10,000 or $12,000 in materials, with the balance of the $20,000 cost going for labor, fees, and builder profit. The project began as a way to help families access mortgage financing from USDA Rural Development’s Section 502 direct program, because very low-income Hale County residents could qualify for USDA loans of about $20,000. Having built 21 varied 20K Homes over a period of years, the Rural Studio is now working to make replicable designs available for use in other parts of the country.

Some of HERO’s clients use USDA loans while others obtain private financing. The fees for a $20,000 mortgage are such a high proportion of the mortgage amount, however, that bank loans for this amount are considered to be predatory loans. Fortunately, in our area some local banks keep their loans in portfolio and do not sell them in the secondary market, so they can make these small mortgages without worrying about the predatory definition. Our buyers have also obtained loans supported by the Federal Housing Administration and the Alabama Housing Finance Authority.

Construction financing has been relatively easier to find. We have used loans from Community Development Financial Institutions (CDFIs) such as the Housing Assistance Council and the Federation of Appalachian Housing Enterprises, area banks trying to meet their Community Reinvestment Act obligations, the Alabama Housing Finance Authority, and the Federal Home Loan Bank’s Affordable Housing Program (AHP).

Grant funding for HERO’s work has come from the Community Development Block Grant program, the Department of Labor’s YouthBuild program, HUD’s Continuum of Care for Permanent Supportive Housing, and AHP. When a client cannot afford even the payments on a $20,000 mortgage, grants from funders like AHP can be applied to the home’s cost to bring the mortgage even lower. We have also relied on volunteer talent from numerous programs, including AmeriCorps’s National Civilian Community Corps, VISTA, and direct service programs; universities; interns; and the Senior Community Service Employment Program (SCSEP). Once, through SCSEP, we were able to obtain the services...
of a retired shopping mall developer in his 70s who stayed with HERO for a full year and provided invaluable skills.

HERO has received funding to cover its own administrative costs from programs like YouthBuild. We have also become a rental housing developer, rebuilding vacant or foreclosed homes and using the resulting rental income stream to support other work.

From one perspective, HERO is innovating, finding non-standard ways to achieve our goals. But I prefer to think that as we renovate deteriorating buildings and reuse existing materials we’re following in a great rural American tradition. We’re using what we have to make what we need.

Sources related to small house design:
- Lean Urbanism, https://leanurbanism.org
- Mississippi State, Carl Small Town Center, http://carlsmalltowncenter.org
- Rural Studio, http://www.ruralstudio.org
- Small House Society, https://smallhousesociety.net

Pam Dorr is Executive Director of Hale Empowerment and Revitalization Organization, based in Greensboro, AL.
Cargo Containers Become Simple, Decent, Affordable and Energy-Efficient Homes...

It’s Happening in Kentucky

By Mary Shearer

Abandoned cargo containers are converted to highly energy-efficient, simple homes for extremely low-income Kentuckians.
Kentucky Habitat for Humanity, Inc. (KyHfH) is the state Habitat organization supporting the work of 51 Habitat affiliates, rural and urban, in 59 counties throughout the Commonwealth of Kentucky. In many of these counties, Habitat affiliates are the only homeownership programs available to Kentuckians who earn 60 percent of the area median income (AMI) or less.

This year KyHfH is approaching our 3,000th home build, serving over 15,000 Kentuckians in first-time homeownership. Our volunteers have provided over 6 million hours of service towards new construction, repairing, and rehabbing homes that have provided a total impact and investment of over $165 million in affordable housing. We are very proud of those we have served, but know the need is still great. For many Kentuckians, even the traditional Habitat program is beyond their reach because of their income, age, special needs, or homeless status.

To serve Kentuckians who are falling through the cracks, KyHfH is retrofitting cargo containers. So far, KyHfH has adapted three containers into simple, decent, affordable, and super energy-efficient housing units. The first two are sited in Upton, a small town of 680 located an hour south of Louisville, and in Harold, located in Floyd County. Our third container home was dedicated around the first of December in Lexington, becoming the permanent home for a Kentucky veteran.

Each year, over 700,000 cargo containers are abandoned in the United States, according to Department of Transportation

KyHfH has adapted three containers into simple, decent, affordable, and super energy-efficient housing units.
Design

The design for the cargo container home stems from two principal visions: to take that which is wasted and develop something that serves a vital human need, and to make a primitive design (a metal box) into a sustainable, structural foundation for an affordable FORTIFIED Home™ – a disaster-resilient home that uses construction standards and methods developed by the Insurance Institute for Business and Home Safety.

To be as energy-efficient and, hence, as affordably maintained as possible, the container home exceeds the recommended insulation level for Kentucky’s climate. How well insulation works is represented by its R-value; the higher the R-value,

Affordability

These cargo container home prototypes – both those hooked up to city utilities and amenities and those partially off-grid – can be retrofitted for a maximum cost of $25,000, excluding the cost of land and a septic system. This price makes them financially accessible to homeless and very low-income residents who could not afford even a traditional Habitat home. With a Habitat mortgage that requires no fees and no interest over 20 to 30 years, Kentuckians earning 20–45 percent of AMI, or less than $6,000–$13,000 annually, are able to own a home, paying no more than 30 percent of their monthly income.

Cargo container homes can fit into almost any lot size, withstand most climate zones, meet all zoning codes, and be built to blend into any housing context. A single 40' x 8'6" x 8'6" container yields a one- to two-bedroom unit that can house two to three persons. Homes can be configured with additional containers to accommodate more people.

Cargo container homes can fit into almost any lot size, withstand most climate zones, meet all zoning codes, and be built to blend into any housing context.

estimates. At the same time, far too many of those living in extreme poverty in the U.S. are homeless or occupy substandard structures. In rural Kentucky, these very low-income residents often live in mobile homes that were built before the “HUD Code” manufactured housing standards took effect in 1976. Those pre-1976 homes are so often deficient that the Federal Home Loan Bank of Cincinnati deems their residents to be homeless.

Cargo container homes can fit into almost any lot size, withstand most climate zones, meet all zoning codes, and be built to blend into any housing context.
the better the insulation. The container home has an R-value of 20 for the walls and 40 for the roof and floor, achieved either by spraying with closed-cell foam insulation in the corrugations of the walls, the roof, and the floor system or by using a foam-board product that creates a thermal break. The cargo container’s strength allows economical construction of a foundation using concrete piers, 24” round and 36” deep. The result is both sustainable and FORTIFIED, as the container is structurally attached to the in-ground piers.

A single container home includes a bathroom with a standard size shower, commode, and sink; a kitchen with cabinetry, a refrigerator, and stove; a master bedroom with a full-size bed; a living room, which can serve as an additional bedroom, office, or storage; an area for dining; and ENERGY STAR® windows throughout. All appliances are ENERGY STAR®, and a continuous ventilation fan is installed to guarantee air quality.

Depending on location and accessibility to utilities, south-facing solar panels (with battery backup) can be installed for partially off-grid container homes. For drinking water, a cistern with a purifier can be installed to collect rainwater or a potable drinking water setup can be included. A compost toilet can be installed, freeing the cargo container home from need for a sewer hook-up.

Currently, Habitat for Humanity International has not proposed cargo containers as affordable, highly livable, sustainable, and permanent homes for those who would otherwise not be eligible to become Habitat homeowners in the United States. KHFH hopes to provide the expertise to develop and train others to construct these homes at minimal cost in order to shelter the extremely poor in sustainable housing that offers much-needed privacy and pride of ownership.

Mary Shearer is Executive Director of Kentucky Habitat for Humanity. For more information on the container home, please contact her at 502-608-7041 or mary@kyhfh.org.
After hesitating to adopt new construction techniques and add costs, Alaska CDC staff have concluded increased energy efficiency is worth it for homeowners.
In Alaska, where winter often lasts five months and temperatures stay below zero for weeks, heating costs can make or break housing affordability. Since Alaska Community Development Corporation (Alaska CDC) began operating the USDA Mutual Self-Help Housing program in 2001, we have built energy-efficient homes that have met the state’s top energy efficiency standards. But when funding sources required even greater energy efficiency, Alaska CDC staff hesitated.

**Self-Help, Weatherization, and Energy Efficiency**

Alaska CDC is a nonprofit agency based in Palmer. Our mission is to ensure decent and energy-efficient housing is available to Alaskans of low and moderate income, by aiding in energy conservation, weatherization, retrofitting, rehabilitation, construction, and financing of such housing. One of our most rewarding programs is the USDA Rural Development Section 523 Mutual Self-Help Housing program, which helps families become homeowners in Alaska’s limited and costly housing market.

As a provider of the Low-Income Weatherization Assistance Program since 1984, we are foremost an energy efficiency agency. We should know a thing or two about building energy-efficient homes. Our weatherization staff is trained in the latest cold climate building techniques. You would think this know-how would make its way into our self-help new construction, and it had— to a point.
For several years, one of our energy specialists was pushing for us to move toward a net-zero home, meaning the total amount of energy used by the building on an annual basis is roughly equal to the amount of renewable energy created on the site. But our home construction staff resisted a deviation from the standard construction techniques they had grown to accept as the right way to build a home.

They also hesitated to impose the additional costs needed to reach that super energy-efficient level on self-help homeowners. In Alaska as in many states, general construction costs have been increasing annually, putting more pressure on our tight self-help construction budgets. It was difficult to justify building homes with even greater energy efficiency at a higher cost to self-help homeowners. Our self-help homes were, after all, meeting the top 5 Star and 5 Star Plus ratings of the state of Alaska’s AkWarm home energy rating system.

Higher Standards

In 2015, the Alaska Housing Finance Corporation boosted its AkWarm home energy rating scale up to 6 Star to reflect a higher standard – a super-insulated home. Alaska’s AkWarm home energy rating system is comparable to the Environmental Protection Agency’s ENERGY STAR, but AkWarm is not associated with that federal rating and certification system. Energy raters in Alaska are certified under AkWarm by Alaska Housing Finance Corporation. Historically, the AkWarm rating requirements have met and/or exceeded ENERGY STAR.

In 2015, housing development funding we received from the Alaska Housing Finance Corporation required our self-help homes to meet the AkWarm 6 Star rating. We also applied for and received a commitment for Self-Help Homeownership Opportunity Program (SHOP) funds, and that award required ENERGY STAR compliance. (We requested SHOP funds from the Housing Assistance Council, one of the intermediaries that administer those monies for HUD. The ENERGY STAR requirement was imposed by Congress and has now been eliminated for future funding cycles.)

Because Alaska’s AkWarm home energy rating system was not the same as ENERGY STAR and bringing an ENERGY STAR rater of heating contractors to Alaska for our self-help program was cost-prohibitive, we were not able to use our SHOP award. Fortunately, we were able to obtain a loan for that self-help development through the Housing Assistance Council using a different funding source.

Alx Dimmick is happy to own one of the most energy-efficient homes in the state.
Making Progress

In 2016, with SHOP and Alaska Housing Finance Corporation continuing their push to meet higher energy efficiency standards – and project funding dependent on meeting those higher standards – our construction staff was resigned to embrace them. This year is our first year building state-of-the-art super energy-efficient homes. Our first group of six is nearing completion.

Components of the 6 Star home include an insulated slab on grade with in-floor heat and double wall 2x4 construction with a space in between for a thermal break. The floor insulation is R-30, exterior walls R-30, and ceilings R-72. Triple pane windows (.25 U-factor), a 96 percent efficiency wall hung boiler, and heat recovery ventilation further enhance energy efficiency. The costs for these energy-efficiency component upgrades average $10,000 for a 1,471-square-foot home with an attached heated two-car garage. This difference includes the cost of additional floor insulation, wall insulation, ceiling insulation, wall framing, and ventilation. Based on Alaska’s AKWarm home energy rating, the projected annual space heating cost for these homes is only $411.

Despite our years of hesitation about the additional costs for the upgraded efficiency, moving this direction now seems like the right thing to do. The long-term affordability of this super energy-efficient home will be worth it for the self-help homeowners like Alx Dimmick.

Alx, a 26-year-old Alaska Native, grew up not far from his new self-help housing home. He is a first-time homeowner and is eager to have his own home instead of renting. Upon completion of the flooring and interior trim, Alx soon will move into and own one of the most energy-efficient homes in the state. Alx is happy about the efficient heating system and the in-floor heat. The thick insulated walls and insulation levels in the ceiling will make it easy and affordable to heat his home. Alx also has noted how well the home is soundproofed from outside noise by the thick walls and triple-pane windows.

Real estate appraisals in Alaska include energy efficiency and are increasing the value of the 6 Star rating. Building super energy-efficient homes affords self-help homeowners the added benefit of owning a home with greater energy efficiency than that of homes being built by many professional developers. This project is proving to be a successful model of how quality housing can be both affordable and also super energy-efficient.

The super energy-efficient homes in this self-help project were made possible by technical assistance grant funding for Mutual Self-Help Housing through USDA Rural Development, participant families’ Section 502 loans through USDA Rural Development, Housing Development Program HUD HOME funds through Alaska Housing Finance Corporation, and Homeownership Loan Program funds through Housing Assistance Council.

Patrick Shiflea is Executive Director of Alaska Community Development Corporation.
Modern manufactured and modular housing options can serve as an affordable alternative to site-built structures.

The U.S. homeownership rate is at its lowest point in decades, falling to just 63.5 percent. This drop has been attributed to a number of factors, but one prevailing issue is a pervasive lack of affordable housing options for low- and moderate-income individuals and families. In rural areas, the homeownership rate is 72 percent.

For many, manufactured housing could serve as a viable option for affordable, sustainable housing. Manufactured housing is the largest source of unsubsidized affordable housing in the U.S. The Housing Assistance Council (HAC) estimates that there are 6.8 million occupied manufactured homes in the U.S., making...
up about 6 percent of the nation’s total housing stock. The median annual income of these households is $28,374, nearly half that of households living in site-built, single-family homes. In 2014, the average sales price of a new manufactured home was $65,300 – compared to an average of $282,800 for a new, site-built single-family home.2

Manufactured housing is often a more affordable housing option, particularly for low-income families. According to the Joint Center for Housing Studies at Harvard University, families living in manufactured homes are less likely to be cost burdened (spend 30 percent or more of their income on housing costs) than families living in apartments, or single-family, site-built homes3. In rural communities, the contrast between renters and homeowners is stark, with 41 percent of renters classified as cost-burdened and 21 percent as severely cost-burdened – spending more than 50 percent of their income on housing. For rural homeowners, 22 percent are cost-burdened, with 9 percent classified as severely cost-burdened, highlighting the wealth-building opportunities inherent to homeownership as compared to renting.4

Advances in the factory-built housing industry, both from a building-science and financial viewpoint, are making manufactured and modular homes a more appealing solution to the affordable housing crisis in rural communities.

So why is manufactured housing so often overlooked, or altogether ignored for its potential as an affordable housing solution?

To answer that question, we must have a better understanding of the industry’s past, and of the pervasive and damaging stigmas that come along with it.

The Stigma of Manufactured Housing

When most people hear the phrase “manufactured housing,” it paints a picture sourced by outdated stereotypes and stigmas that have been reinforced by popular culture over decades. The most popular portrayals of manufactured homes come in the form of “mobile homes” parked in “trailer parks” – composed of old, rusted single-wides placed feet from one another on trash-littered lots. This of course is not only woefully inaccurate for today’s manufactured housing, but offensive to the millions of families all over the country who live in these homes.

The term “mobile home,” in the context of the manufactured housing of today, is primarily used to refer to units built prior to the enactment of the Manufactured Home Construction and Safety Standards, also known as the HUD Code, in 1976. The HUD Code created a national blueprint for the design, performance and installation of all manufactured homes in the country, enforced by
Modern manufactured and modular housing also presents many advantages for the buyer.

Pre–HUD Code mobile homes are often cited as some of the worst housing stock in America, characterized by poor construction quality, lack of insulation and crumbling foundations. These units are incredibly energy inefficient and by most estimates, consume 53 percent more energy than any other type of housing stock available. Limited financing options for mobile homes have also helped to create and fuel negative perceptions. Most often, manufactured housing is financed by personal property, or “chattel” loans, characterized by higher interest rates and shorter loan terms. According to recent HMDA data, 68 percent of all manufactured housing loans – both chattel loans and mortgages – are considered “higher-priced mortgage loans”, compared to just three percent of site-built home loans considered higher-priced.

These factors – some perceived and others based in some reality – have defined the popular image of manufactured housing for more than half a century.

The State of Manufactured Housing Today

By comparison, today’s manufactured housing stock marks an incredible shift from the past. In 1994, the HUD Code was updated to include much improved energy efficiency standards. In 2005, HUD issued the Model Manufactured Home Installation Standards, outlining methods for on-site installation that comply with the HUD Code. Improved building technology, manufacturing processes, and regulatory mechanisms have combined to create a vastly different landscape for manufactured housing, far from the stereotypes of the past.

Modern manufactured and modular housing also presents many advantages for the buyer. The construction of a factory-built home is process-based, so building times are more predictable and the controlled environment prevents damage or loss due to weather and theft. Customization can also be more controlled, with specific costs tied to features and amenities up front.

Home manufacturing facilities are also making great strides in reducing waste in building practices. Recently, all 36 of the manufacturing facilities owned and operated by Clayton Homes – one of the nation’s largest manufactured and modular home builders – were awarded an ISO 14001 registration, a set of internationally agreed-upon measures that are designed to reduce the cost of waste management and reduce energy consumption.

These homes are a far cry from the mobile homes of past generations. Gone are the metal roofs and siding that are emblematic of the stereotypes of mobile homes. Modern
manufactured and modular homes can be built with vinyl or Hardie board siding, asphalt shingle roofing, and stone façade. Today’s homes provide a much greater degree of energy efficiency, and the Systems Building Research Alliance estimates that 11 percent of the 65,000 homes produced annually are ENERGY STAR-certified, generating less impact on the environment and saving homeowners and families hundreds in monthly utility bills.

In the wake of the 2007–2008 financial crisis, legislators and policymakers have worked to make the financing of manufactured and modular homes of much greater value to the homebuyer. The Dodd-Frank Wall Street Reform and Consumer Protection Act helped create regulatory authority on chattel loans, which still finance the majority of manufactured homes today. Additionally, the Housing and Economic Recovery Act of 2008 mandated that the government-sponsored enterprises Fannie Mae and Freddie Mac have a “duty to serve” underserved markets, in particular rural, manufactured housing and affordable housing preservation markets.

Manufactured Housing Done Right®

All of these factors are coming together to create opportunities for manufactured housing, opportunities that Next Step – a Louisville-based nonprofit housing intermediary that works with nonprofit organizations and industry partners across the country – looks to be a leading voice in moving forward.

The genesis of Next Step came out of a desire to make manufactured housing a practical, sustainable solution
to the housing affordability crisis facing many rural Americans. Next Step’s theory of change is built on a simple premise. When a manufactured home is done right every single time — on the right foundation, providing comprehensive homebuyer support and access to fair financing — there is an opportunity for systemic change within the industry.

This theory of change is achieved by fostering relationships between community-oriented nonprofit organizations and manufactured housing builders, retailers, and lenders. Next Step ensures that homes are designed to balance quality with affordability — built to meet or exceed ENERGY STAR® standards and placed

**When a manufactured home is done right every single time, there is an opportunity for systemic change within the industry.**

on an engineer-designed FHA Title II Permanent Foundation. Comprehensive homebuyer education and support for the homeowner, and access to fair, fixed-rate home financing ensure capacity for families to build wealth through homeownership. Our members and partners advocate for policy changes that seek to advance increased energy efficiency in manufactured homes, fair lending practices, and ending zoning and other discriminatory actions against manufactured homebuyers.

Next Step is also working with Freddie Mac to implement a pilot program in Kentucky that seeks to create a consumer education curriculum for buyers of manufactured homes. One focus is to provide educational information to
consumers via housing counseling agencies. Another objective is to expand the number of lenders that originate real property loans on energy-efficient manufactured homes.

Continued collaboration among key stakeholders, advancements in manufacturing and building technology, bolstered consumer finance protection, and innovative lending products and practices are creating a unique space for manufactured housing: one where families in rural communities can again achieve the dream of homeownership, wealth-building, and prosperity.
From Tornado To Sustainable Community
In Saint Peter, Minnesota

By Rick Goodemann

After a major disaster, intensive planning and community-wide innovation produced new affordable housing as well as improved electricity and broadband service.
A new era in affordable housing and sustainable communities began for the City of Saint Peter, MN when it was devastated by a tornado. Working with Southwest Minnesota Housing Partnership (SWMHP), the city spent more than 15 years planning and innovating its housing, infrastructure, and public facilities, with strikingly successful results. Innovations included the extensive planning process involving a variety of partners, and the incorporation of cable and broadband access in rebuilding.

**Tornado Damage**

On March 24, 1998, a severe tornado devastated the community, inflicting damage estimated at $235 million in 1998 dollars. Six hundred homes were destroyed or sustained major structural damage and 1,700 others were badly damaged. Saint Peter’s historic landmarks, including the downtown and several churches, as well as the hospital and library, were severely impacted. Gustavus Adolphus College, a private Lutheran college, was hit directly. The college’s church steeple snapped. Basic city infrastructure including roads, electricity, and water systems were significantly damaged.

The city (population 11,000) reacted quickly to address immediate disaster relief needs, and then committed to a planning process that would build the foundation for its future. It requested help from SWMHP, a nonprofit housing provider for nearly 30 counties in southwest and south central Minnesota. Gustavus Adolphus, the city’s public schools, the Chamber of Commerce, and the residents of Saint Peter were all essential to the long-term recovery process.
Planning for the Future

The first step to recovery was to establish a detailed plan of action. It was clear that recovery would take months, even years. A future plan for the community had to be well thought out, sustainable, and based on a needs assessment. Planning activities were led by the Minnesota Design Team (MDT), a group of volunteer architects, landscape architects, urban planners, tourism advisers, and other community experts. Sponsored by the Minnesota branch of the American Institute of Architects, MDT works with towns across the state for three-day weekends where, after extensive input from the community, they analyze a community’s strengths and challenges to determine a unified vision of priorities for improvement.

Saint Peter’s planning sessions revealed a consensus on a number of points. First, participants hoped to replicate the “old town” feeling of pre-tornado Saint Peter and to provide opportunities for “community building.” They did not want to lose the city’s rich architecture and historic features, while also blending the old with the new. It would be important to grow specific parts of the community to increase population and local businesses, and to identify ways to be attractive to young families and individuals. At the same time, residents wanted to prevent urban sprawl. Finally, economic, social, and ecological sustainability were key.
Housing Design

To meet the housing-related factors identified in the planning process, the city would need a variety of housing and financing options. Single- and multifamily homes would be balanced by adding value and curb appeal through implementation of detailed covenants. To encourage neighbors to interact, porches or decks would be important features of the new homes, with garages set back and accessible through alleys.

Access points to neighborhoods were designed to be picturesque, and industrial traffic would be controlled to encourage connections through other subdivisions and communities. Streets were intentionally narrowed to encourage slower and safer driving. Neighborhoods included additional lot space and even medians where trees and other greenery could be planted, and trails and park systems were integrated to allow for more pedestrian friendly activities.

SWMHP put these principles into effect as it worked with the City of Saint Peter to develop new subdivisions for existing and new residents. Nicollet Meadows was created in 2000–2004 as a mixed-income neighborhood with 78 affordable homes, 60 market-rate apartments, and 20 affordable rental townhomes. The development adopted what later would be known as Building Better Neighborhoods, a form of new urbanist standards refined by the Greater Minnesota Housing Fund. The design standards include smaller lots, narrower streets, sidewalks, connection to the community trail system, a central park, and home designs reflecting that “old town” feeling. This created a unique neighborhood identity as a family-friendly area. The Saint Peter School District, which sold the land at a discounted rate, benefited greatly due to increased enrollment.

The same concepts were applied to the next subdivision, named Washington Terrace, developed in 2005. It included 86 affordable lots, 24 market-rate lots, and 24 townhomes. Demand was so high that when lots went on sale at 8 a.m. on a weekday in 2004, one person camped out all night to be first in line, and the second person arrived at 4:40 a.m.

For both of these developments, SWMHP provided project management and homebuyer services including mortgage counseling and closing services. Construction costs and mortgages, down payment assistance, and closing cost aid was funded by Minnesota Housing, USDA Rural Development, and the Greater Minnesota Housing Fund.

Underground Utilities

Besides rebuilding the downtown area and families’ homes, the city also moved its electrical lines underground. A few months before the tornado, with 75 percent of its electrical facilities overhead, the city decided that in the
future any new electrical facilities would be put underground. When the tornado damaged most of the overhead electrical lines, the city was able to proceed with that plan immediately. Using disaster money from FEMA, Saint Peter moved its electric distribution system underground.

At the same time, the city decided it would be cost effective to include an empty conduit next to the electrical lines. The conduit added $490,000 to the cost, a tiny fraction of the $20 million spent to move everything underground. This extra line owned by the government allowed for cable companies to lease the line instead of building new proprietary lines at a cost of about $6.5 million. Because the city government invested in putting an empty pipe, companies could reduce their capital expenditures by 80 percent by leasing it from the city government instead, so more companies were willing to serve the community.

This initial government investment fostered an opportunity for competition among multiple broadband providers, allowing customers to have more options and lower prices. Thus in 1999 Saint Peter was one of the first places in the U.S. with many options for internet/cable. Four companies now offer telephone and internet service in the city, and two companies offer cable TV service. Broadband access was part of the city’s appeal and was used to attract the target audience of working people under age 30 to move to the recently built subdivisions.

**Long-Term Results**

Saint Peter now has a new community center and library, a new state of the art hospital and nursing home, a new wastewater treatment facility, and a new power generation facility. Residential development includes three subdivisions (224 lots/170 homes) including 60 lots created in 2016, three new affordable rental properties including 115 Low Income Housing Tax Credit (LIHTC) units, and one new market rate development (60 units), the preservation of an existing USDA Section 515 property (30 units) in 2016, and funding to develop 30 intensive service units to house persons exiting the criminal justice system (2017 LIHTC allocation). New employers flooded to the area, bringing both entry-level and professional jobs. Enrollment at Gustavus Adolphus increased. The city’s population is now greater than it was before the tornado and it is still growing.

“Saint Peter is a very special place and it’s the people that make a place special,” says Todd Prafke, the City Administrator. “The tornado gave us good habits to work together. We have a community that is willing to take measured and appropriate risks if they can see a benefit.”

Quality partners with a common vision and similar goals are essential, Prafke explains. “One person can’t control everything that has to be
controlled or know everything that has to be known. The right partners make it possible. When it’s their job to help you and your job to help them, then it is successful.”

The ongoing cooperation between Saint Peter and SWMHP has resulted in visible and sustainable improvements in the city, building both the structures and the relationships that make communities good places to live, grow, and work. Every little success that took place within Saint Peter after the tornado made an impact. Structurally, there was a successful balance between the old and new. Demographically, the population was stronger. Economically, Saint Peter had turned into a sustainable community with a prosperous housing industry. The housing development there was not just about building subdivisions – it was about building a community. Expectations may have been set high, but overall, the community has exceeded its goals.

Rick Goodemann is Chief Executive Officer of Southwest Minnesota Housing Partnership.

Disaster Innovation: MiCASiTA

Like Saint Peter, other communities have also used disasters as catalysts for housing innovation. MiCASiTA offers an alternative approach to providing housing to the hardest to reach and most challenged communities across the country. The Rio Grande Valley, like many other communities in Texas and nationally, suffers from extreme poverty and lack of quality, affordable housing. With limited financing and design options, many housing and community development organizations are forced to either turn away or maintain long waiting lists for would-be homeowners not able to qualify for traditional affordable housing delivery models.

MiCASiTA, a collaboration between the Community Development Corporation of Brownsville (CDCB), the Rio Grande Valley MultiBank, the Texas State Affordable Housing Corporation and buildingcommunityWORKSHOP [bc], seeks to change that by offering innovative financing and design options tailored to grow with the homeowner’s needs. For would-be homeowners able to qualify only for smaller loan amounts, a 600 square-foot “starter home” is built. This “starter home” is specifically designed to expand as the family’s savings and financial stability grow. This approach builds on the success of the CDCB/[bc] RAPIDO project, which created a temporary to permanent disaster recovery housing solution that starts with a small core that can be put in place immediately after a natural disaster and can grow as government assistance is available for the area. Find out more about the initiative at www.bcworkshop.org/posts/micasita.
The Basics of Process Improvement for Affordable Housing Organizations

By Josh Crites

New ideas that improve project management can pave the way to an efficient and organized affordable housing process.

Can we process an annual review more efficiently? Can we make our ADA process more streamlined? How about improving the time it takes for us to turn a unit after a move out or increase the number of work-orders we close per day or week? If you buy a new housing software system or start inspecting units with iPads instead of paper will your work happen quicker? These questions, or similar ones, come up at every housing organization and are attacked in different ways.

Let’s start by assuming that it’s good to work smarter and more efficiently. Lean process improvement methodology is a management system with a set of tools that allows organizations to do just that. Lean comes from the Toyota production system. Their main drive was to eliminate waste in processes while respecting their employees. The methods worked so well that they have been used in industries from building airplanes to ordering office supplies. They can also be used by affordable housing organizations. Taking time to examine the way you do your work and looking for better ways to do it can reap major rewards.

Any time you try to improve your daily functions, you are taking on process improvement. You can choose among methodologies/tools with names like Lean, Lean Six Sigma, Business Process Improvement, AGILE, and SCRUM. Some people I speak with say that plain old common sense is a good jumping off point. The major goal here is that examining the way you work and looking for improvements can have a major payoff.

My process improvement journey started with a Six Sigma Lean Green Belt course at the University of Washington. I did not learn anything revolutionary, but the course was extremely practical and gave a good method for solving...
Many of us jump to the solution without taking the time to really understand, define, and measure the problem to begin with.

I learned that in most of my prior projects, I had completely skipped over the measure phase that defines how big the problem is, and I had skipped the analyze phase that identifies all issues that might have been causing our core problems. Think about this for a second. If you say you are going to implement a new process in accounting because it will save time, shouldn’t you measure how much time the original process is taking before making the change? Many of us jump to the solution without taking the time to really understand, define, and measure the problem to begin with.

Lean Six Sigma’s DMAIC structure is very useful for approaching projects. Tools for each phase help you work through core business process issues and find solutions. These tools will help whether you are looking at annual reviews, maintenance work-orders, accounting processes, or ADA request processes. Let’s review some definitions of the DMAIC process.

**Define:** Do not jump to conclusions about how to solve a problem until you have taken time to understand the problem. Work with the staff who are directly in the process to see where the issues are and how severe they are. Ensure that you have the right players involved and that there is enough capacity to undertake a project to improve the situation. Once you have a better hold on the cause of the problem, set a goal statement. For example, if you are experiencing an abnormal number of change orders you might establish a goal to reduce the number of change orders from an average of 15 per project to five within the next six months.
Measure:

Measuring can come in many ways and many forms. You can look at staff hours used to complete a task and then convert that into staff dollars. You might look at wasted steps, wasted materials, or maybe something specific like the change order example. If work is falling behind schedule, you might measure by how much and at what point in the process the delay is taking place.

Analyze:

Once you are clear on the problem and how big it is, figure out why it is happening – the root cause. There are a host of tools available, such as a cause and effect diagram or brainstorming. I often use some of the simplest tools. Asking the question “why” multiple times can help you get down to the root issues of a problem. Six Sigma terminology refers to “5 whys” because usually after asking “why” five times, you finally get down to the root cause. I have found that I do not always need to ask the question five times but if I ask some follow-up questions, it usually helps me dive deep enough.

To use the “5 whys,” write down your problem. Ask “why is this problem taking place?” and write the answer. If that answer does not get to the main cause, ask why again and write the answer. Keep going until you get to the root cause.
5 Whys Example

**Problem:** The number of change orders has increased by 80%.

1. **Why** are change orders increasing? 
   *Because the work needed cannot be completed as currently planned.*

2. **Why** can the work not be completed as planned? 
   *Because the original planning did not take into account some of the more detailed parts of the project.*

3. **Why** did the original plan not take into account more detailed parts of the project? 
   *Because we fell behind in our planning efforts and had to rush.*

4. **Why** did we fall behind in our planning efforts and rush? 
   *Because we did not hire enough project managers.*

5. **Why** did we not hire enough project managers? 
   *Because we were trying to cut costs.*

The analysis shows that cost-cutting led to multiple change orders.

**Improve:**

Once you fully understand your problem, it’s time to implement countermeasures. Here are some ideas that can help you.

1. **Future State Map:** Once the solution is in hand, you need to sit down with your team and map out exactly how day-to-day work will look with the solution or countermeasure in place. Gain a firm understanding of what will happen and make sure it fits your business needs.

2. **Failure Modes and Effects Analysis:** This is a fancy way of saying think through all that could go wrong before implementing improvements. You want to identify potential problems that may arise using the improved process, so that you can find ways to avoid them.

3. **Standardized Workflow:** Work with your team and staff to document your new processes. Everyone needs to be on the same page, whether it is in written or verbal form. Staff may not need the documentation but it is good to have on hand.

4. **Training Plan:** Do not go into an implementation without a solid training plan. Create a training plan and training scripts and ensure you have knowledgeable people doing the training.

5. **Go-Live Support Plan:** Make sure you have heavy support for when you go live with any changes. That means extra staff should be available to assist if issues should arise.

**Control:**

This step means you put a plan into place to make sure that the results stay as desired and, if they do not, you follow up and make changes as needed. A lot of agencies go through a process improvement and realize great benefits only to see a backslide over time. That is why you need to have a control process in place.

Lean is more than just tools and the scientific method of process improvement; there is a total management system to think through. It becomes more complex and can include everyday huddles, visual management of data, leadership, and coaching. The work being done in the development sector is often underfunded and competitive. Give yourself and your agency the benefit of being one step ahead by using lean and examining your processes.

---

**Josh Crites** is a strategic advisor at the Seattle Housing Authority and a certified Six Sigma Lean Black Belt from the University of Washington. He can be reached at josh.crites@seattlehousing.org.
A View From Washington

Doubling Down in a Time of Uncertainty

By Ellen Lurie Hoffman and Michael Bodaken

As advocates for affordable housing face the uncertainties of a new Administration, it is clear that our work and our partnerships have never been more essential.

Using the tools of real estate development, rehabilitation, finance, and policy advocacy, the National Housing Trust (NHT) has worked for over 25 years with state and local governments, housing advocates, and nonprofit development partners to preserve the stock of assisted multifamily housing. NHT is responsible for saving more than 25,000 affordable homes in 41 states, leveraging more than $1 billion in financing. During that time, we have worked with Republican and Democratic administrations to help achieve our mission of housing preservation.

So, naturally, in the weeks since the U.S. election, we have been trying to understand and predict how the election outcome will impact our work preserving affordable housing.

The outlook is still unclear. It will be a while before we fully comprehend the ramifications of the November results. However, we are confident in knowing this: affordable housing and community development engagement, together with our partners in the field, has never been more essential.

Here in Washington, advocates for affordable housing face multiple uncertainties.

• We do not yet know the Trump Administration’s approach to rental housing assistance, but fully expect there will be additional pressure placed on the USDA and HUD budgets. There is now a Continuing Resolution (CR) freezing federal spending through April 28, 2017. For FY 2017, HUD needs approximately $1.5 billion more than FY 2016 spending levels and USDA needs $18 million more to maintain current program levels and renew existing housing assistance contracts. These increases are essential to keep all families using tenant and project-based rental assistance in their homes. A CR
for the remainder of FY 2017 or an appropriations measure without this added funding would result in deep cuts to critical housing programs that could cause thousands of families and children, as well as millions of people with disabilities, to lose access to stable housing, putting them at increased risk of homelessness.

• Tax reform is an almost certainty. We will be working with the ACTION Campaign, a national, grassroots coalition of roughly 1,600 national, state, and local organizations and businesses, to assure that the Low Income Housing Tax Credit and tax exempt bonds are maintained and improved in whatever tax bill is signed by President-elect Trump.

• Some members of Congress will try to alter housing policy through ideological riders to spending bills or block granting housing assistance and establishing time limits and work requirements.

• The budget reconciliation process may enable congressional leadership to proceed with its agenda with a simple majority of votes in the Senate.

So what is certain? For starters, our nation is facing increasing income inequality. It is no small matter that housing and energy costs are contributing drivers to such inequality. As Harvard sociologist, Matthew Desmond, has most recently observed, “We have failed to appreciate how deeply the cost of housing is implicated in the creation of poverty.”

Fair access to opportunity is an essential component to reducing inequality in our society.

Over the near term, we urge all of you working at the state and local level to double down the intensity of your efforts to secure and preserve affordable housing. For years, NHT has grounded its policy engagement in our work with state housing finance agencies, local fair housing advocates and grassroots environmental organizations. Local policy has never been more important. Indeed, states and localities answered the bell on November 8: ballot measures approved in North Carolina, Maryland, Oregon, and California will produce over $1 billion in new funding for multifamily housing development and preservation.

The other driver of poverty for low-income households is the energy burden. Numerous studies have documented this disproportionate financial burden,
with energy costs seven times more burdensome for the bottom 20 percent of earners than for the top 20 percent.\(^5\) With nearly 50 percent of all very low-income renters residing in multifamily housing, the failure to reduce energy consumption in rental housing will continue to adversely affect those families least able to afford high energy bills. The answer: energy retrofits. Typically, energy retrofits reduce household energy consumption (and bills) by 20 percent. Just as important, energy retrofits provide better health outcomes for low-income households.\(^6\)

Again, state and local organizations have led the way on reducing the energy burden. Three years ago, NHT helped to develop Energy Efficiency for All (EEFA),\(^7\) a coalition of national and local organizations dedicated to linking the energy and housing sectors together in order to tap the benefits of energy efficiency for millions of low-income families in 12 states (California, Georgia, Illinois, Louisiana, Maryland, Michigan, Minnesota, Missouri, New York, Pennsylvania, Rhode Island, and Virginia). Currently EEFA has excellent working relationships with strong local organizations in each of these 12 states. EEFA is a partnership of the Energy Foundation, Elevate Energy, NHT, and Natural Resources Defense Council.

So, what is to be done? NHT will continue to work with its partners to fight to protect resources for affordable, equitable housing and promote energy practices that cut crushing housing and energy costs for low-income seniors and families in urban, rural, and suburban communities.

Stay tuned.

---

**Ellen Lurie Hoffman** is the Federal Policy Director and **Michael Bodaken** is the President of the National Housing Trust in Washington, DC.
45 YEARS. 45 STORIES.

To celebrate 45 years of helping local organizations build affordable homes in rural America, HAC collected 45 stories of populations served, project successes, and aspirations for rural communities. All attendees at the HAC 2016 Rural Housing Conference received this publication to share in celebrating HAC’s special anniversary.

To view the publication, visit ruralhome.org/HAC45

WHAT THE OPIOID CRISIS MEANS FOR RURAL AMERICA

HAC highlighted the opioid crisis and its impact on rural America at the HAC 2016 Rural Housing Conference. USDA Secretary Tom Vilsack offered a keynote address weaving addiction struggles in his family into a broader discussion of the crisis’s impact in rural communities. Alan Morgan, CEO of the National Rural Health Association, also weighed in, emphasizing the importance of rural health care availability and partnerships as effective antidotes.

To watch videos of the remarks, visit HAC on YouTube, bit.ly/HACVideos

INEQUALITY: THE RURAL PERSPECTIVE

Income inequality and poverty were addressed by national policy and thought leaders at the HAC 2016 Rural Housing Conference. Rep. Blaine Luetkemeyer (R-MO), chairman of the subcommittee overseeing HUD and USDA housing programs, Rep. Keith Ellison (D-MN), who chairs the Congressional Progressive Caucus, and John Henneberger, a 2014 MacArthur “genius” and co-director of the Texas Low-Income Housing Information Service, all shared their perspectives on how housing has the power to reduce poverty and inequality.

To view these speeches, visit bit.ly/HACVideos