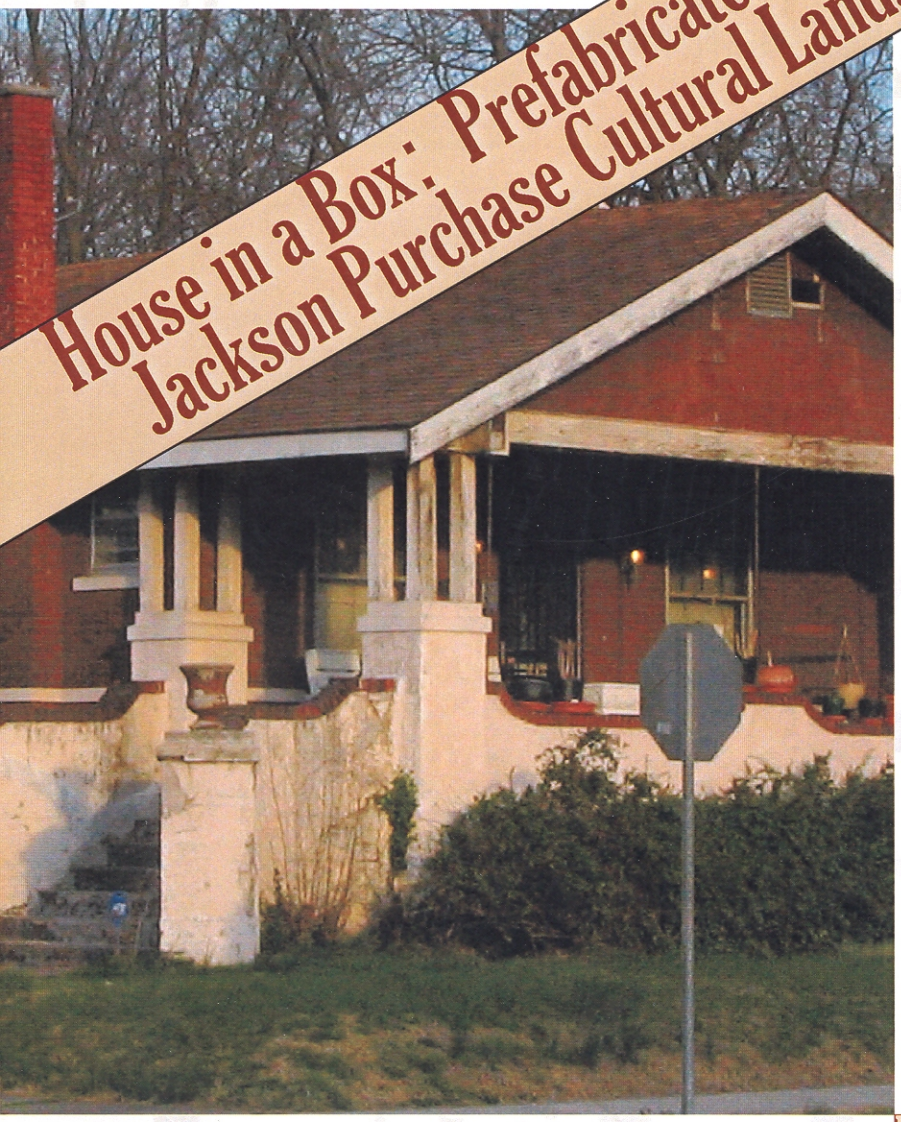
House in a Box: Prefabricated Housing in the Jackson Purchase Cultural Landscape Region, 1900 to 1960



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Kentucky UNBRIDLED SPIRIT

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Cover and title page images: Sears, Roebuck and Company "Osborne" House in Paducah, Kentucky. Cover image: Gunnison houses on Park Avenue at H.C. Mathis Drive, Paducah, Kentucky

Introduction

House in a Box: Prefabricated Housing in the Jackson Purchase Cultural Landscape Region, 1900-1960

Imagine selecting a house from a catalogue and having it delivered in a package complete with windows, doors, trim, and roofing materials ready for assembly. The idea of receiving a house in a box may seem unusual, but surprisingly there are houses in twentieth century neighborhoods that originally arrived in such a bundle. Prefabricated houses, though modest in scale with few distinguishing characteristics to make them noticeable in urban, suburban, and rural areas across the country, actually contributed greatly to twentieth century American domestic architecture. What makes prefabricated housing significant in American cultural history?

Designed and produced throughout the twentieth century, prefabricated houses were developed to satisfy the public's insatiable demand for new, modern houses. For the first time working and middle-class families had the opportunity to purchase their first house. Coming out of a period where people typically lived with extended families or rented apartments, prefabricated housing offered an opportunity to have modern amenities and spacious quarters. Additionally, prefabricated dwellings were relatively easy to erect and often cost less than custom-built or speculative-built houses. Prefab houses provided new avenues of home ownership to populations that may have otherwise been left out of this important aspect of the American Dream.

An Ohio family with their Gunnison house. Photo courtesy of David Morgan.

Housing shortages created by the United States' expanding population and increasing industrialization provided a ready market for prefab houses. Burgeoning company towns were also attracted to the convenience of prefabricated housing. In areas where labor and materials were sparse, a prefabricated house could be selected to provide quality housing in

an accelerated time frame. Prefab manufacturers answered the call for immediate housing from the turn of the twentieth century to the post-World War II era, and beyond.

Employing methods of assembly-line production, prefabricated house manufacturing capitalized on advances in building technology and materials. The factory production of prefab houses distinguished them from conventionally built houses. Commonly known as "prefab" or "kit" houses, these packaged houses were constructed with wood, steel, plywood, or even pre-cast concrete. Architecturally, styles ranged from traditional to very modern or even avant-garde.

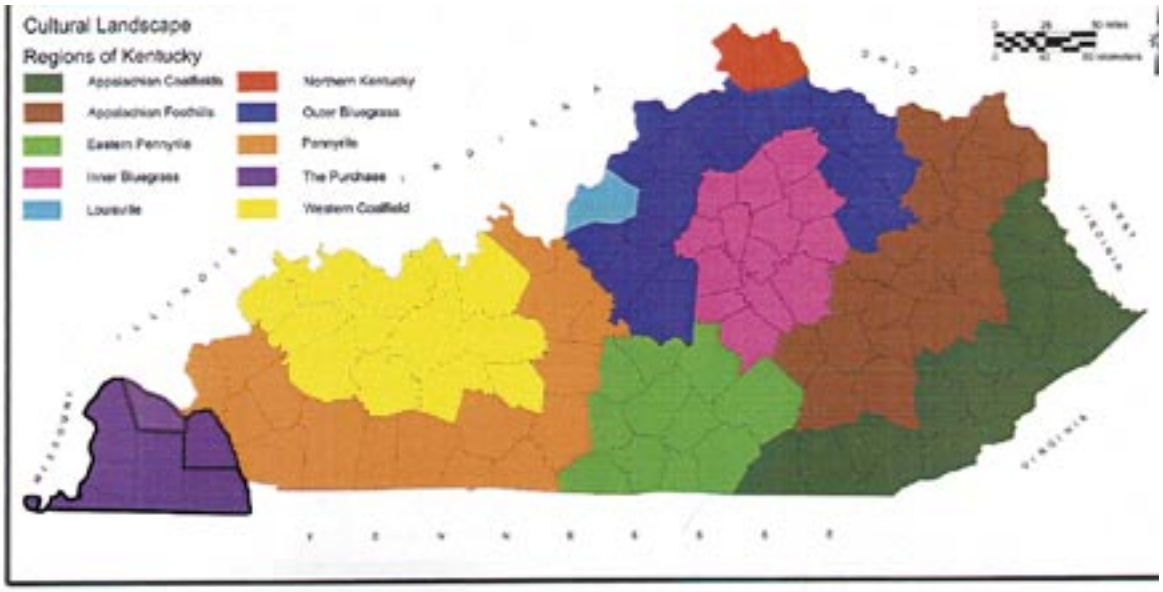
Much of this housing was chosen directly by the consumer through mass-mailed catalogues or advertisements in magazines. Some prefab manufacturers, however, marketed houses through a local or regional dealer. Once the prospective homeowner chose a design, the prefab house would arrive from the factory, by train or truck, to the building site in a bundle. Then, either the homeowner or a local contractor constructed the kit or prefab house on the house lot. Assembling a prefab house only took a few days.

To some, prefab or kit houses have become synonymous with Sears, Roebuck and Company catalogue home. While Sears was an early pioneer in the effort to produce affordable mass housing, it was never the only producer. Rather, there were a number of small and large companies during the twentieth-century that were quite popular within their shipping and sales region. Important producers of prefabricated housing include: Sears, Aladdin Homes, Gordon-Van Tine, Wardway (Montgomery Ward), Lewis, and Sterling. Regional companies located in Indiana, Ohio, and Kentucky were substantial producers of prefab housing including: Gunnison Homes Inc., National Homes Corporation, Lustron, Steelcraft, Peaseway Homes, and General Plywood Corporation. In a variety of forms prefab houses took their place alongside conventionally constructed houses, contributing to America's expanding twentieth-century housing

A Sears, Roebuck and Company "Uriel" house in Anderson County.

stock. The impact of prefab houses in American domestic architecture has been important and enduring.

The twentieth century phenomenon of prefabricated housing, produced at factories and selected by customers, is the focus of this study undertaken by the Kentucky Heritage Council / State Historic Preservation Office (KHC), and the Kentucky Transportation Cabinet (KYTC) as a mitigation project for a United States Army Corp of Engineers (ACE) undertaking in Graves County. This housing study will examine prefabricated housing from 1900 to 1960 in an eight-county area defined by the Kentucky Heritage Council as the Jackson Purchase Cultural Landscape Region, encompassing the counties of Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Marshall, and McCracken. Formally established as a cultural landscape region by the Kentucky Heritage Council in the 1980s to serve as a



Map of Kentucky reflecting the Kentucky Heritage Council's Cultural Landscape Regions. The two counties outlined in the Jackson Purchase Region are McCracken and Marshall, which served as case study survey areas for this report. (Source: "A Cultural Historic Survey of the Proposed Telecommunication Tower Site West of Future City, McCracken County, Kentucky).

planning unit to research historic themes and develop preservation contexts, the Jackson Purchase Cultural Landscape Region will be the focus of this prefabricated housing study.

The area defined as the Jackson Purchase Cultural Landscape was ideally situated for the development of prefabricated housing. Many of the producers that manufactured prefabricated housing types were located within a 200-mile radius of the region. Additionally, the

proximity of the Mississippi and Ohio Rivers as well as significant rail routes made the area attractive for industrial development. In turn, the need for worker housing increased with the continued industrial growth of the region. Prefabricated housing was ideally suited to meet these needs.

Though research and survey attention in all eight counties of the Jackson Purchase Cultural Landscape Region is needed for the study of prefabricated housing, time constraints for producing this report necessitated the selection of case study areas within the region. A desire to examine the prefabricated phenomenon in urban, suburban, and rural areas led to the selection of two counties. Paducah and surrounding environs in McCracken County and the communities of Benton and Calvert City in Marshall County served as case studies for the documentation and evaluation of prefabricated houses. Fieldwork in these areas was conducted to gain insight into the status of extant resources associated with prefabricated housing in the Jackson Purchase Cultural Landscape Region.

This report is organized into four sections. The first section includes the project methodology. This section will detail the methods and sources that were utilized to produce this report. In the second section, a historic context for the prefabricated housing industry is examined. Factors that contributed to the development of prefabricated housing will be discussed. Producers of prefabricated housing and their designs, as well as construction techniques will be explored in this section. Assistance in identifying prefab housing in the field is also discussed. The third section is comprised of both an evaluation of prefabricated domestic resources and the results from the field survey in the case study counties. Registration requirements for evaluation of significance and integrity considerations are incorporated within this third section. Brief county histories and reporting of fieldwork for extant resources are also offered in this portion of the report. The final section includes a conclusion and discuss suggestions for future research.

It is important to note that this study is not intended to be a definitive work on prefabricated housing. Because there has been very little work done on the topic, this report can only begin a dialogue to address questions of identification of prefab resources and their eligibility for the National Register of Historic Places. In spite of this provisional nature, it is hoped that this report will aid researchers in identifying and evaluating prefabricated domestic resources.

Section I. Methodology

The Kentucky Heritage Council (KHC) initiated a study of prehabricated house in the Jackson Purchase region in February 2006. In April of 2005, the Kentucky Transportation Cabinet (KYTC), the Kentucky Heritage Council, and the United States Army Corp of Engineers (ACE) entered into a Memorandum of Agreement to mitigate the adverse effects to the historic Aladdin "Norwood" kit house in Mayfield, Kentucky dating from 1924, which had been determined eligible for inclusion in the National Register of Historic Places under Criterion C. The KYTC proposed construction of KY 80 from the US 45 Bypass to the KY 121 Truck Route south of Mayfield in Graves County, Kentucky which resulted in the demolition of this historic property. Because the house was eligible for the National Register and transportation officials needed better standards of significance and integrity for prefab resources, KYTC funded a study of prefabricated housing in the region of western Kentucky known as the Jackson Purchase Cultural Landscape Region. The project was conducted under the supervision of the Kentucky Heritage Council's Site Identification Program Manager and produced by a Research Assistant hired specifically for the project. The KYTC Historic Preservation Coordinator Rebecca Turner was also essential in developing this study.

Research Design

The Prefabricated Housing study is an examination of resources related to the various forms of prefabricated housing during the early- and mid-twentieth century in the eight county area known as the Jackson Purchase Cultural Landscape Region. Because of the short time frame in which to produce this report and the cultural/historic commonalities shared within the region, the decision was made to select two counties to represent the Purchase region. Survey and research was done in these two sample counties, allowing for a concentrated examination of prefabricated housing in urban, suburban, and rural contexts. Since very little survey work has been done to document prefab houses, the need for this study is timely because many are becoming old enough to qualify for the National Register of Historic Places as they turn 50 years in age.

Primary and secondary sources were consulted at the inception of the project to gain insight into the different property types that might be encountered during field study. Primary sources used for research in this report include Sanborn Fire Insurance Maps, other historic maps, prefab manufacturer's catalogues, and trade journals. Secondary sources provided historic context information for both prefabricated housing and local historical development in the case study counties.

Additionally, two prefabricated housing historians were consulted to give a perspective on their research findings. Jerry Cecil of Winchester, Kentucky has studied Sears, Aladdin, and Gordon-Van Tine associated precut houses. Randy Shipp of the Lexington-Fayette Urban County Government Historic Preservation Office is considered an expert on Gunnison Homes research. Randy also has research on National Homes and Peaseway panelized prefab houses. Research and field work from both of these architectural historians proved quite useful during the course of the research.

From these sources four distinct types of prefabricated construction methods were identified: precut, panelized, sectional, and preassembled systems. (See Section II, 40-58 for more information on these specific property types). According to industry statistics, the predominant number of prefab housing was constructed from either precut or panelized building methods. Sectional and preassembled types were less prolific. Primary and secondary sources also provided information about the physical appearance of prefab houses to help aid in identification in the field.

Fieldwork was conducted in the second and fourth week of March 2006 to identify and evaluate associated resources in the two case study counties, McCracken and Marshall. The majority of the survey work completed was at the reconnaissance level due to time constraints and accessibility to resources. Intensive level survey work was however accomplished in Paducah where access to the interior of several prefabricated houses was secured. The results of the case study county fieldwork are located in Section Three of this report.

Information Sources

There is still much more information needed to gain insight into the prefabricated house industry of the twentieth-century. A fair amount of research has been accomplished concerning prefabricated houses associated with *precut* house types like Sears and the Aladdin Company. Probably the most well known secondary source about *precut* houses is Katherine

Cole Stevenson's and H. Ward Jandl's *Houses by Mail: A Guide to Houses from Sears, Roebuck and Company*. Sears House Researcher, Rosemary Thorton also has published two books, *The Houses that Sears Built* and *Finding the Houses that Sears Built,* which provided useful information on identifying Sears houses specifically. The sources are primarily focused on the resources associated with Sears precut houses.

Since Sears was not the sole manufacturer of *precut* houses, additional sources were consulted to identify other manufacturers involved with this type of prefabrication. Robert Schweitzer and Michael W.R. Davis' *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses* discussed not only the history of prefabrication but illuminates numerous companies involved in *precut* house production. Also available are several reprints of catalogues by Dover Publications for Wardway Homes, Aladdin, Gordon-Van Tine, and Sears. Additionally, the online archive, http://clarke.cmich.edu/aladdin/Aladdin.htm, at the Clarke Historical Library at Central Michigan University details the history of the Aladdin Company through catalogues from 1908 until 1954. There are also several websites for Sears precut houses, which are listed in the Bibliography of this report.

These sources can assist the researcher in identifying *precut* houses, though none should be considered definitive. It is certainly worth looking at all of these sources before deciding which company might have been responsible for the *precut* house in question's origins. Project staff found that some historic resources thought to be a particular type of *precut* house identified in field guides, were in fact not associated with a prefab manufacturer at all. This was revealed during a more thorough investigation of the interior, and through measuring the exterior dimensions of the house. This result illustrates the difficulty in positively identifying a *precut* house based on exterior appearance alone.

Published literature concerning other types of prefabricated housing including panelized, sectional, and preassembled property types is not as developed as the precut sources. Some useful sources that project staff consulted to do research on these types of prefabricated houses include *The Prefabrication of Houses, Prefabs on Parades, A Practical Guide Prefabricated Houses,* and *The Prefabricated Home*, noted in the bibliography. These sources provided insight into the production and manufacturers of prefab housing associated with panelized, sectional, and preassembled property types. These sources also contained some examples of house designs that prefab manufacturers offered. For Lustron Houses, a type of *panelized* prefab, there are a few online sources that provide historic context on their production and also fur-

nish images of these prefab houses. A listing of these websites is located in the Bibliography of this report. At this point, there have been no other websites devoted to other major producers of prefabricated housing. Unfortunately, no single comprehensive field guide of all prefabricated house types exists at this time.

Some catalogues offered by panelized prefabricated housing manufacturers were located in private collections of architectural historians consulted for this project and original purchasers of prefab homes. Gunnison Homes, National Homes, and Capp Homes produced promotional literature detailing floor plans and styles of prefab houses available from their product lines. At this time, there is no public repository that contains product manufacturers catalogs.

Though this project did not allow time to investigate all available trade journals, an extensive collection of prefabricated house journals is housed at the Cincinnati Public Library including *Prefabricated Homes* (published 1943 to 1947) and *Prefabrication* (published 1948 to 1949). *PF- The Magazine of Prefabrication* published 1953 to 1958 is available the at University of Louisville library (1958 only) and at the Ohio State University library (full run). These journals would be particularly helpful for researchers attempting to uncover information about panelized, sectional, and preassembled house types. The *Avery Index to Architectural Periodicals* is also an excellent source to locate articles concerning prefabricated housing. Look for articles under the heading "Fabricated Buildings" and "Fabricated Houses." These sources could be a useful way to learn about the different prefab models offered by manufacturers.

Local history sources, such as published local histories, Sanborn maps, and local informants, for the case study counties were also helpful to project staff for chronicling neighborhoods that developed during the period between 1900 and 1960. This local history literature discussed rapid industrial growth that occurred during the period, suggesting that housing might have been urgently needed. Project staff used this information along with historic maps to identify potential areas in the case study counties where prefab housing might be located. Sections Two and Three of this report discuss historic context information for prefabricated housing and the Jackson Purchase Cultural Landscape Region.

Issues with Fieldwork

Locating prefabricated housing in the field can be problematic. Records containing information on prefabricated housing sales for many manufacturers do not exist, have not been

located, or have been destroyed. Since there is no single systematic way to identify the locations of prefabricated houses at this point, the researcher must rely on other methods to find prefab houses in the field. Particularly, examination of local Sanborn maps, if available, allow the researcher to identify areas in which prefabs might exist. It is especially important to look carefully at houses and neighborhoods from 1900 to 1960. Identification presents a challenge to the prefab researcher because many prefabricated houses are hard to verify without more detailed research. Prefabs can rarely be identified by windshield survey, exceptions to this being Gunnison houses, National Homes, and Lustron houses. Tips for researching prefab houses are located in Section Two of this report.

Local informants who might be familiar with neighborhoods or areas where prefabs were constructed can be the most direct way to locate these resources. Initially, local contacts in McCracken County that have previously assisted the Kentucky Heritage Council were consulted. Through these contacts, general areas where prefabricated housing existed were identified. To further this effort, project staff issued press releases published in the case study counties' newspapers. An article in the *Paducah Sun,* proved to be quite fruitful in producing contacts with information about prefabs. This greatly assisted fieldwork in Paducah by giving project staff access to prefabricated houses and locations of neighborhoods containing prefab resources.

The opposite outcome occurred in Marshall County. Previous to this research project, no local contacts in Marshall County had been established. Project staff attempted to develop local informants by contacting the Jackson Purchase Historical Society, the Benton Public Library, and the Marshall County Chamber of Commerce. Unfortunately, there were no volunteers identified to assist with this project. An article about the research study appeared in the Benton *Tribune-Courier,* however, this did not yield any response from local citizens to help identify prefabricated houses in Marshall County. Because of this lack of local support, project staff determined that fieldwork in Marshall County would have to be conducted on a reconnaissance level only. Project staff concluded that having local informants to assist with identification is a crucial element in locating prefabricated housing, since access to interiors is crucial to identifying most precut and some panelized prefabs.

Section Three of this report details the results of the fieldwork in the case study counties, as well as evaluation and integrity assessments for the resources.

It is hoped that this report will begin to inform researchers about prefabricated housing for the purposes of both identification and significance. The next section will develop a general historic context for prefabricated housing on the twentieth-century American landscape. Factors will be outlined that contributed to the growth of prefabricated housing during the period between 1900 and 1960. The production methods and property types associated with prefabricated housing will also be explored in more detail.

Section II. Domestic Prefabrication Historic Context

'It has been said, and with justification, that prefabrication is 'all things to all people.' To some it means a completed house with each light bulb attached in it socket, rolling off the production line. To others it signifies no more than factory-built door and window units ready for installation in traditionally built homes. While it is next to impossible to obtain a definition inclusive enough to encompass the various types and degrees of prefabrication, it is not difficult to assay the general purpose of the prefabrication industry."[1]

A.L Carr

A Practical Guide to Prefabricated Houses

Defining the Prefabricated House

Offered as an affordable housing option starting in the early twentieth century, prefabricated houses can be found in just about any community. Either purchased from a catalogue or dealer, new homeowners could have their dream house assembled in as little as a few days. Families could have a dream house of their own which was made possible by the industrialization of house manufacturing. How did this process evolve and what makes the prefab house significant?

The term "prefab house" has a variety of meanings. Houses produced with some type of prefabrication have existed in various forms throughout history.[2] This report will examine the period between 1900 through 1960, which saw tremendous growth and maturation of the prefabricated housing industry in the United States. The Prefabricated Home Manufacturers' Institute and U.S. Department of Commerce define prefabricated houses this way:

> A prefabricated home is one having walls, partitions, floors, ceilings, and/or roof composed of sections or panels varying in size which have been fabricated in a factory prior to erection on the building foundation. This is in contrast to the conventionally built home which is constructed piece by piece on the site.[3]

For the purposes of this report, the term "prefab" will serve as an umbrella definition for precut, panelized, sectional, and preassembled buildings, meaning that there has been some degree of factory manufacturing of the house before it arrives at the building site for quick assembly. It is important to remember that prefabricated houses were intended to be permanent, well-built dwellings that remained on a fixed site unlike trailer housing, which

could be moved with little effort. Prefab houses represent an attempt to industrialize house production to provide easily assembled and affordable dwellings to American working and middle-class populations.

Comparing prefabricated houses to other types of dwellings constructed during the period of significance helps to illustrate their role in American cultural history. Prefab houses did share some similarities with pattern book houses, tract houses, or mobile homes. The difference between prefabricated houses and these other forms of housing was in the concept of packaging. Produced by a single company and bundled for delivery to the house site, prefab houses created a method of house production that was thoroughly industrialized.[4] It is useful to recognize and contrast the alternate house types available to compare with the prefabricated house.

Gunnison Homes brochure envisioning the American Dream House. (Source: Private collection).

Offered in catalogues, pattern book houses of the nineteenth century provided model plans for prospective homebuyers. Available for purchase by the middle class, pattern books of Victorian-styled houses only included architectural drawings.[5] Building materials, trim, and sheathing had to be purchased separately by the customer. Though these pattern book designs utilized standardized stock materials, these houses were not considered prefabricated because a single company did not carry out the production of the entire house.[6] The construction of pattern book houses used traditional on-site preparation of the lumber requiring a number of carpenters.[7]

Beginning in the 1910s and 20s, pattern books and magazines reflected the change in architectural tastes, as bungalows became a popular house type. Marketed to working- and middle-class families, pattern books published by the Radford Architectural Company and Gustav Stickley's *Craftsman Homes*, and designs appearing in popular magazines like *Ladies'*

Home Journal, Craftsman, and Bungalow Magazine, reached a wide audience. Mass advertised pattern book houses offered inexpensive bungalow plans to construct the house but did not include potential purchase of the building materials. In contrast, prefabricated houses marketed through the same channels by companies like Montgomery Wards, Sears, and Gordon-Van Tine, included the architectural drawings and an entire kit complete with the necessary elements to construct the house.[8]

Tract houses, or "spec-built" housing, also shared some similarities with prefab housing in that they borrowed the manufacturing methods of prefabrication. Emerging in the 1930s, tract houses allowed builders to use assembly-line building methods at the job site. By constructing the same or similar house on a large scale, building costs were reduced.[9] In the postwar period of the late 1940s and the 1950s, tract housing became a popular mode of constructing new, suburban houses. Developed by Alfred Levitt and his sons, Levittown on Long Island, New York, serves as the most well known example of tract housing. Borrowing from the precut manufacturers model of standardized construction, the Levitts sought to mass-produce six versions of a Cape Cod-styled house.[10] Emulated in suburban developments across the country, "spec-built" housing relied on multiple construction crews using standard framing methods to build mostly Cape Cod and Ranch-styled houses. Yet, prefab houses distinguished themselves from tract housing because they arrived at the building site prepared for assembly. The bulk of production had been completed at the factory making a prefab house easy to assemble with a small crew.[11]

Tract housing being constructed at Levittown. (Source: Building Suburbia: Green Fields and Urban Growth, 1820 - 2000).

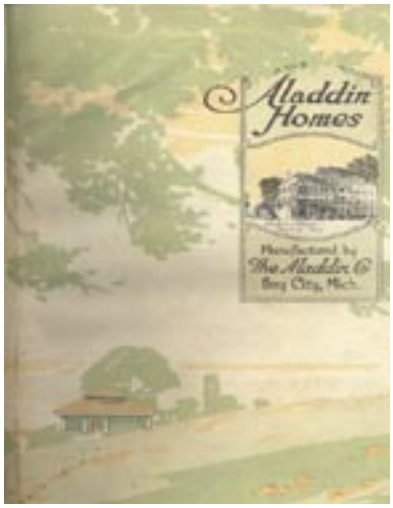
Mobile homes, or house trailers are probably the most closely allied house type to prefabricated dwellings. Developed during Depression-era of the 1930s, house trailers' origins began with the idea that they could serve as temporary housing. Mobile homes provided a quick and inexpensive way to obtain decent housing. Assembled entirely at a factory and trucked to the building site, house trailers shared many of the same characteristics as prefab houses.[12] Though parallels in production methods exist between mobile homes and prefab

houses, mobile homes original purpose differs. Initially, house trailers were conceived as "mobile" and even included wheel axles since they were meant to provide temporary shelter for mobile people, such as construction workers. Trailers could be hauled from site to site as required on their own wheels. In practice, a majority of mobile homes actually remained fixed to their original sites with the wheels obscured by concrete blocks or some other foundation material. The building industry, however, classified mobile homes in a separate category from prefabricated houses. Mobile homes were built on a fixed steel chassis, whereas prefabricated houses were designed without means of independent mobility. Prefabricated houses also were placed on permanent foundations, while trailers' foundations varied from temporary to permanent. Though it could be argued that preassembled prefabricated housing was identical to mobile homes, preassembled prefab houses were never conceived to be moveable, but instead were meant to be permanent homes.[13]

Typical 1950s house trailer. (Source: Dream of the Factory Made House).

Other types of prefabricated buildings besides houses existed throughout the twentieth century. Prefab manufacturers produced barns, commercial buildings, garages, and sheds that could be easily assembled at the building site. Some were even offered by the same companies that manufactured prefab houses, including Sears and the Aladdin Company. Summer cottages and camp buildings offered by these same companies were also prefabricated. These prefab cottages were meant to serve as temporary shelter that could be knocked-down and moved to a different sites.[14] Though it is important to understand and note the existence of these other similar property types, this study is concerned only with exploring the historic context of permanent, prefabricated domestic buildings.

The Aladdin Company offered other prefab buildings besides houses. (Source: Central Michigan University Aladdin Homes Archive).



1918 Aladdin Homes Catalogue. (Source: Central Michigan University Aladdin Homes Archive).

Prefab Housing Eras

Prefabricated houses developed in two distinct periods. The *precut* house type dominated the first three decades of the twentieth century. Though there was some experimentation with the other types of prefabricated housing during this period, especially with panelized prefabs, the precut houses produced by manufacturers like Sears, the Aladdin Company, Gordon-Van Tine, Wardway, and Lewis-Liberty were the most popular between 1900 to 1930.[15] Precut houses started to wane in popularity during the 1930s, mainly because of the dramatic effects of the Great Depression. Some precut manufacturers had previously offered mortgages with their products. Many of these homeowners were unable to keep up with their mortgages once the depression-era took hold, causing the default rate for these mortgages to skyrocket and discouraging companies from offering this type of financing in the future.[16]

The 1930s served as a transitional period for prefabricated housing as *panelized*, *sectional*, and *preassembled* prefabricated property types started to establish a foothold in the housing industry.[17] During World War II, many prefab manufacturers provided defense industry housing. This further bolstered industry improvements in materials and assembly methods.[18] It was not until the post-World War II period though, that these three prefabricated housing types gained prominence on the American landscape. Throughout this time, sectional and preassembled prefab housing only occupied a small market share in the prefab industry. The panelized prefabricated house was especially dominant during the period between 1940 through 1960.[19]

A Lustron "Westchester" House built in post-World War II Louisville.

The historical trends and events that led to the creation of the twentieth century prefab industry underscore the significance of mass-produced, industrial housing in the United States. These social, cultural, and industrial developments will be explored in the following section.

Contributing Factors that Led to Prefabricated Houses in the United States

Experimentation with prefabricated dwellings occurred throughout the nineteenth century but on a much smaller scale than what developed in the twentieth century. Prefabricated houses constructed of wood, canvas, or corrugated iron were generally intended to serve as temporary shelter.[20] Early prefabricated buildings were not produced by assembly-line methods. Prefabricated houses of the nineteenth century were modest in scale and design, serving the most basic shelter needs. Nineteenth century prefabricated housing was used mainly in areas of new settlement. Most notably, British producer Manning of London sold prefabricated cottages to colonial settlers early in the nineteenth century.[21]

Manning's prefab cottage that was sent to newly established British colonies to provide quick shelter. (Source: Dream of the Factory Made House).

In the United States, the 1849 Gold Rush in California necessitated immediate housing. The emergency housing situation created by the sudden influx of optimistic gold miners could not be addressed on the local scale. With labor and material shortages in the fledgling territory, prefab dwellings provided the perfect solution. Prefabricated houses constructed from around the world were sent to the area in response to the population boom.[22] Overall, prefabrication during this period was still on a small scale and focused on specific groups' housing needs. The benefits of mass production discovered during the Industrial Revolution had not been fully realized during the mid-nineteenth century.

By the turn of the twentieth century, the climate for mass-produced prefabricated housing improved due to advances in technology, marketing, and distribution. Assembly-line production techniques could be applied to house production by using standardized materials. Mass advertising and a growing network of transportation routes assisted in the development of the prefab house industry. Responding to housing needs created by immigration

and urbanization, and with an overarching goal of modernization, prefab houses emerged as a viable housing option for the growing American population. Several factors played a role in creating the prefabricated housing phenomenon.

Housing Shortages

At the turn of the twentieth century, cities and towns across the United States experienced a great influx of immigrant and rural populations. The need for affordable and permanent housing became a pressing issue in American communities. Working- and middle-class families had a great desire to move away from the crowded inner city to a suburban house of their own. Crowded living conditions in tenement buildings and substandard urban housing made the outlying suburban areas attractive to prospective homeowners. Meeting the demand from this new market of potential house purchasers, prefab manufacturers advertised affordable and attractive alternatives for housing.[23]

In addition to urban immigration, housing shortages were also experienced in areas where there was rapid industrial development. Extractive industries like coal mining and timber production established work sites in rural settings, where housing, labor, and building materials could be in short supply. As a result of rapid industrialization, company towns were necessary to provide services to workers. As might be imagined, company towns provided a ready market for prefabricated housing.[24] Standard Oil, for instance, placed a one million dollar order with Sears for 192 kit houses in 1918.[25]

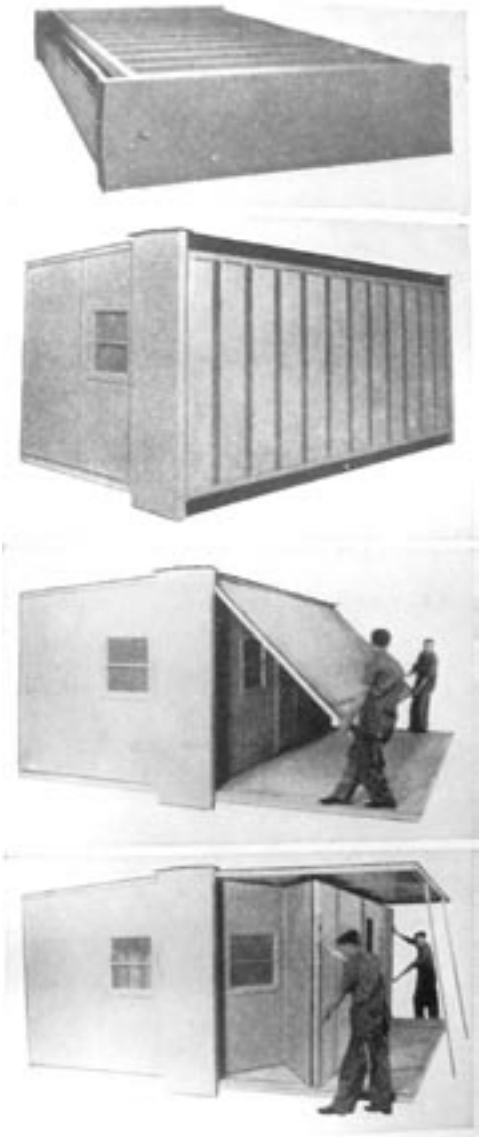
At the end of World War I, returning veterans and their families, along with the continuing influx of immigrants, created demand for new homes. Multi-generational households that existed before and during the war years had suppressed house construction. With families now earning steady wages from the improving economy, the need for the entire extended family to live under one roof diminished.[26] The desire of young families to move into their own houses created a housing boom by 1920. It was estimated that one to two million homes were needed to address the housing shortage.[27]

Established prefab manufacturers were able to provide suitable permanent housing on an efficient basis. During the 1920s, the supply of housing stock across the country increased rapidly. New suburban neighborhoods that ringed cities and towns throughout the United States filled with popular housing types such as bungalows, American Foursquares, and Colonial Revival cottages. Prefabricated housing played a major role in this era of

development. For example, Sears had its peak sales year in 1926.[28] The housing boom was flourishing when the stock market crashed in 1929. This event quickly brought a halt to new housing construction.[29]

The onslaught of the Great Depression dampened growth in the housing market for almost a decade. The majority of residential construction that occurred during this period was focused on small remodeling projects.[30] During this time there was a great deal of experimentation in the prefabricated housing industry to find new ways to produce economical housing options that were easy to construct. This would set the stage for a new generation of prefabricated housing that moved away from the precut method of prefabrication.[31] For example, Gunnison Homes emerged during the 1930s, offering panelized prefab houses.[32] By 1935, *The Architectural Forum* had identified 33 different prefabricated housing manufacturers in the United States poised to offer affordable mass-produced housing.[33]

The waning days of the Depression saw an upswing in housing construction, only to be halted by the start of World War II. With rationing of resources for the War effort, residential construction was no longer a feasible activity.[34] In spite of these strictures, the defense industry, spurred by the U.S. entry into World War II, created demand for worker housing. Prefab manufacturers offered an efficient and affordable solution. As a result of the 1942 Lanham Act, which provided funds for war housing, five prefab companies, including Indiana-based Gunnison Homes and National Homes, gained government contracts worth $153 million to provide 70,000 units of prefab housing to defense industry workers.[35] By the end of World War II, the total amount of prefab units produced for the defense industry reached 200,000 across the United States. Though this figure accounted for just 12 percent of war housing, this period of prefab construction prepared the industry to handle the post-war production levels for housing.[36]



Prefabricated war housing. Packed flat for transport, these houses were simply unfolded at the site. They could be erected easily with a crew of two. (Photo: The Prefabrication of Houses).

With the effects of the Great Depression and World War II, the post-war period of the late 1940s witnessed a great deal of pent-up demand for new housing. Returning GIs anxious to start families provided a ready market for prefabricated housing. The National Housing Agency estimated that a minimum of five million new houses would be needed to meet the demand. Across the country, suburban neighborhoods filled with nearly indistinguishable tract and prefab housing, developed along new roads extending from urban centers. These neighborhoods separated people along economic and racial lines, creating homogenous populations in distinct residential areas.[37]

The increased demand for suburban housing created an attractive market for prefabricated housing manufacturers. World War II prefab production improved the industry's methods of manufacturing a diversity of materials.[38] In the post-war years, prefab manufacturers increased their speed in producing good quality, permanent housing to the home-buying public. Prefabricated housing manufacturers sought to capture this sizeable new segment of potential homeowners by offering an inexpensive and sturdy alternative to conventionally built housing. Companies producing prefab houses jumped to 280 in 1946, almost tripling the number of manufacturers offering prefab dwellings in 1944.[39]

Affordable Housing

Increased awareness with providing decent quality and affordable housing started with the Progressive Era at the turn of the twentieth century.[40] The cost of labor and materials for a conventionally built house made them unattainable for many middle- and low-income families.[41] The introduction of mail-order houses fostered first-time homeownership for all economic and racial classes. The kit house companies offered payment plans and mortgages to populations that might not otherwise be able to purchase a house. The only requirement to purchase a catalogue house was a steady wage. Kit houses were sold directly to the homeowner from the manufacturer, avoiding the proverbial "middle-man," (in this case a building contractor) in the construction process.[42]

Self-built neighborhoods emerged during the early decades of the twentieth century, propelled by the availability of kit houses. Since precut houses were designed to be do-it-yourself endeavors, even supposedly unskilled homeowners could assemble the kit. The mail-order houses allowed a homeowner to build the house at their own pace. Many owner-builders constructed their houses after work and on weekends. For African Americans, self-

built neighborhoods provided an avenue to home ownership that otherwise might not have been possible, due to racial discrimination by lending institutions. Precut houses offered by mail-order catalogues gave homeowners an affordable, more equitable housing option.[43]

During the decade of the 1930s, the need for providing affordable housing increased. Among the many economic hardships created by the Depression, home ownership levels were severely affected. By the mid-1930s, more than half of the American population could not afford to purchase a new house.[44] Several private enterprises and government agencies concentrated their efforts on studying methods for reducing housing costs through prefabrication.[45] The Bemis Foundation, Pierce Foundation, U.S. Forest Products Laboratories and Housing Research Foundation at Purdue University all worked on developing prefab systems and materials that would reduce construction costs in order to make houses more affordable to the general population.[46] The research undertaken by these groups advanced prefabricated house production methods and materials. As a result of these improvements in prefabrication, the industry was poised to develop the affordable housing market in the 1940s.

The 1923 "Cedars" was a typical small-sized precut house sold by mail order companies. Reasonably priced precut houses gave many families the opportunity to own their own home. (Source: Central Michigan University Aladdin Homes Archive).

The post-World War II housing boom greatly increased American families' ability to purchase a home of their own. The federal government encouraged homeownership by offering affordable mortgage plans with small down payments through Federal Housing Administration (FHA) loans and Veteran's Administration (VA) loans to help resolve the housing crisis.[47] FHA loans had been established during the New Deal under the National Housing Act of 1934 as a way to stimulate affordable housing in the private housing indus-

A page from a National Homes promotional catalogue featuring quality housing at a reasonable price. (Source: Private collection).

try. FHA loans created mortgages that extended for twenty years and allowed for payments in monthly installments with low interest rates. In order to qualify for FHA loans, houses had to meet design and engineering standards established by the Federal Housing Authority.[48] In the postwar years, FHA loans were again offered to foster new, affordable housing. Administered through the FHA, VA loans created by the GI Bill allowed veterans to purchase a house without a down payment.[49]

The prefabricated housing industry capitalized on the availability of housing loans provided by the FHA and the VA by making sure their houses qualified for these types of mortgages. The prefab industry had previously been excluded from FHA loans because the houses did not fit into conventional financing procedures. In 1947, Congress authorized the FHA to extend loans to prefabricated housing.[50] Prefab manufacturers offered modest starter homes at a lower cost than speculative built or custom-built houses. Two bedroom, one bath models were a common prefab design, though larger models were also available, depending on the budget of the potential house buyer.[51]

Cultural Influences

During the Progressive Era of the early-twentieth century, some reformers focused on domestic concerns, such as improving household efficiency and sanitation. The large dwellings of the Victorian Era created a complex, formalized living environment. Rooms devoted to a single function and ornate woodwork presented the housewife with daunting schedule of housekeeping, even with the aid of servants. Attitudes toward domestic life changed at the beginning of the twentieth century. Emphasis was shifting to simplifying families' lives by changing domestic spaces, which served to make the Bungalow, for example, a fashionable choice for working- and middle-class dwelling.

1923 Aladdin Catalogue featuring sanitary devices and easy-to-clean elements. (Photo: Central Michigan University Aladdin Homes Archive).

The design of the Bungalow utilized an open plan that provided multi-functional rooms and created an informal atmosphere with no accommodation for domestic servants. The Bungalow design was well suited for the more informal lifestyles of working- and middle-class families of the early twentieth century.[52]

One of the key elements to this shift in domestic living arrangements was to improve household efficiency. With an increased attention to scientific methods, domestic planners focused on the importance of making chores and duties more efficient. Numerous technological innovations brought timesaving devices into the domestic sphere to increase efficiency and modernize living spaces. For the first time, indoor plumbing, electric lighting, and appliances were incorporated into new and old houses.[53] Just like conventional houses, kit-house residences accommodated these modern features. Precut houses in Bungalow and American Foursquare designs popularized these modern domestic features, since they were more affordable.[54]

The emphasis on sanitation also grew out of the Progressive Era. Crowded city tenements had created unsanitary living conditions, drawing the attention of reformers. Stressing the need for natural light, fresh air and clean spaces, domestic planners promoted house designs that incorporated more healthy features. Architectural elements incorporated into Bungalows and American Foursquares included numerous windows, as well as open air sleeping porches, both of which reportedly fostered a healthful environment. These new modern house types departed from their Victorian counterparts by reducing the amount of ornate trim and complex domestic spaces. Simplifying decorative elements to smooth, planar surfaces, and creating open plan living spaces, aided the housewife in removing dust, thought to be unhealthful.[55]

The trends in domestic efficiency and sanitation continued in the post-World War II period, as designers were concerned with making the house operate with the efficiency of a machine.[56] The 1950s housewife could have all the modern conveniences at her fingertips. Kitchens were designed to maximize the use of the space and save steps. Mothers could watch their children while doing housework because of open plan arrangements and picture

National Homes featured the "Youngstown Kitchen" with their prefab house models. The new dishwasher in the kitchen made it easy for the modern housewife to keep the kitchen in order. (Source: Private collection).

windows. New appliances like dishwashers and washer and dryers appeared in the kitchen and utility room to assist the housewife with daily chores.[57] Prefab manufacturers like Lustron consciously designed the floor plans with these efficiencies in mind.[58]

After World War II, sanitation continued to influence domestic design. Easy-to-clean materials like Formica, porcelain enamel coated steel, and stressed-skin plywood were incorporated into postwar houses. Prefab manufacturers were at the forefront of the trend by employing these materials in their house designs, often touting this as an exclusive benefit to prefab ownership. Gunnison Homes' promotional materials emphasized the ease of cleaning the house's stressed-skin plywood surfaces. Lustron Homes, made of porcelain enamel coated steel panels, advertised that their homes could be easily cleaned with soap and water on the interior and exterior.[59]

1950s Gunnison housewife showing how simple it was to clean stressed skin panels. (Source: Gunnison Homeowners Guide, private collection).

The Prefab House Industry

"There's no revolution in home manufacturing. It's a slow evolution of all homebuilding into the factory."[60]

Jim Pease,

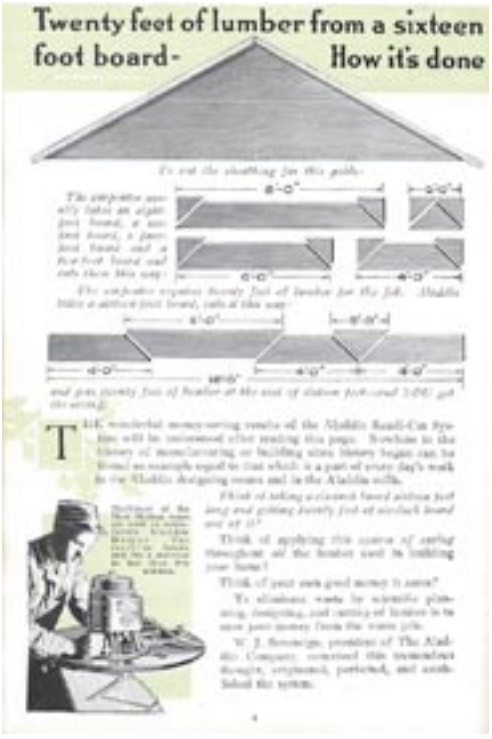
President of the Home Manufacturers Association

It is important to understand both the socio-cultural and economic factors, as well as the technological advances and business operations, which fostered the development of prefabricated housing. Conventionally built houses, either custom designed or speculative, involved more labor and materials since, each structure was erected at the site.[61] Though building methods for traditionally built houses became more cost effective, especially after World War II, prefab dwellings still retained an advantage due to the meticulous planning, design and manufacturing before they even left the factory. An examination of the industry's developmental influences in production, materials, design, marketing, and distribution illuminate how the prefab is distinct from traditionally constructed dwellings.

Industrialization

One of the biggest advantages of prefabricated production was the ability to standardize building elements. Kit house producers employed standardization principles in their house designs not only to reduce costs but also, to facilitate ease of construction.[62] As an outcome of mass-production techniques, standardization created inexpensive building elements that could fit into any design the precut company offered. At all levels, standard materials streamlined the construction process. Plumbing and lighting fixtures were manufactured in uniform sizes to be used in any kit house. Doors and windows with exact measurements allowed for planning a variety of fenestration patterns. At the structural level, wood framing members were milled at standard dimensions that created interchangeable elements for a variety of designs. The benefit of standardization was that it reduced costs, which was

The Aladdin Company of Bay City, Michigan was the first precut manufacturer to have national appeal in the booming housing market. (Source: Central Michigan University Aladdin Homes Archive).



Precut manufacturers carefully calculated lumber cuts to minimize wasted materials and reduce costs for the customer. (Source: Central Michigan University Aladdin Archive).

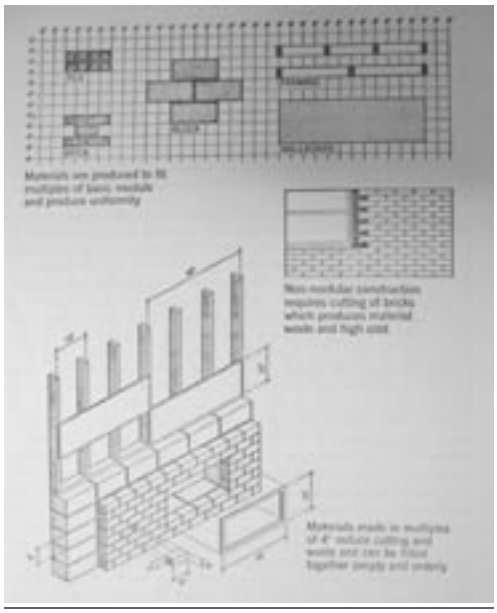


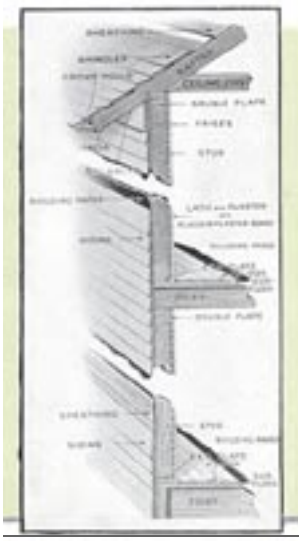
Diagram of modular coordination illustrating how different materials were manufactured in standardized dimensions to facilitate construction. (Source: The Prefabrication of Houses).

a goal of precut prefab manufacturing during the first decades of the twentieth century.[63]

Company architects continued to approach prefab design with a scientific methodology in the second period of industry development. Carefully calculating the size of each room, in-house architects maximized materials to prevent waste and save money. As a part of this building methodology, modular coordination played an important role in prefab houses. Developed by Albert Farwell Beamis of the Beamis Foundation, this type of design relied on modules that were in uniform sizes based on 4-inch multiples. Functioning as a type of standardization, modules, whether in the form of bricks or panels, facilitated prefab construction by creating construction units with standard dimensions. The purpose behind modular coordination was to reap cost savings by reducing on-site labor for cutting and fitting of materials.[64] Panelized prefab manufactures like Gunnison and Lustron readily utilized this method of design in their houses. Gunnison relied on 4-foot by 8-foot modules for the stressed-skin panels. The Lustron panels used for exterior sheathing were 2-foot by 2-foot.

The idea of mass-producing houses represented a radical departure from conventional building methods. Taking cues from assembly-line production of automobiles, prefab companies sought to make house building cheaper and faster. Author Curt Dietz describes the advantage of assembly-line production as the "ability to produce large numbers of identical parts that can be assembled into standardized units."[65] The prefab industry touted the advantages of assembly-line production because of the quality control standards in place at the factory. Each employee on the production line had a specialized job that assisted in the manufacture of prefab houses. Prefab manufacturers promised that their products were superior to conventionally constructed houses where labor was not specialized.[66] Though a variety of prefab systems developed

throughout the first half of the twentieth century, each method involved some type of production at a factory before the house arrived at the building site.[67] The numerous methods employed by prefab manufacturers will be explored in the next section.

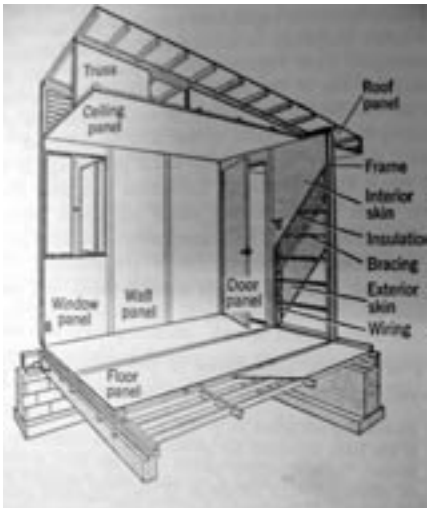


The precut structural system was based on light timber framing techniques. Only basic carpentry skills were required to build the kit house making them easy to construct. (Source: Central Michigan University Aladdin Archive).

Production Methods and Structural Systems

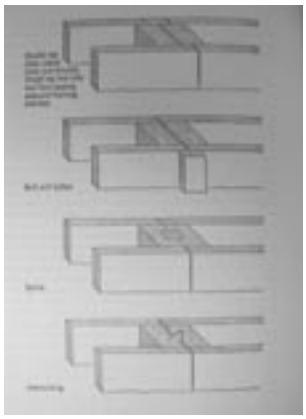
Precut house prefabrication relies on the precise cutting and numbering of all the structural framing members at the factory. Companies that utilized the precut method often would have lumber mills where the processing and packaging of the houses occurred. Lumber purchased in bulk by the manufacturer was cut into standardized dimensional studs, rafters, plates and joists at the company mill. The actual assembly of the prefabricated members occurred at the building site.[68] A significant number of Sears houses, for example, were milled at their Cairo, Illinois plant across the Mississippi River from Kentucky.[69]

Local lumber companies across the country also offered precut materials used to assemble houses. When the popularity of kit houses spread across the country, local lumber companies emulated the product idea by offering their own precut kits. Sometimes, these lumber companies actually used plans from the mail-order companies to produce their kits.[70]



The panelized structural system utilized panels for walls, ceilings, and floors. (Source: The Prefabrication of Houses).

Panelized prefabrication can be broken down into three different fabrication systems: the open frame panel type, the stressed skin panel (or sandwich panel), and the solid panel type. All three types benefited from the introduction of sheet materials such as wallboard (drywall) and plywood developed in the 1930s.[71] Prefab companies that made panelized houses supplied four basic components in panel form: floors, walls, ceilings, and roofs. Panel sizes could range in size from 4-foot by 8-foot to entire walls of 30-foot by 8 foot, depending on the manufacturer's designs. The degree of finish material varied among prefab companies, though the walls generally were sheathed with interior and exterior materials.[72]



Typical joints used in panelized prefab houses. (Source: The Prefabrication of Houses).

Since panelized prefabs were manufactured as separate units, they were connected together by joints. These could be in the form of overlapping, butt and batten, spline, or interlocking joints.[73]

The open frame panel house used precut lumber, which was assembled at the factory to form a modular unit. The interior and exterior wall finishes had to be applied at the house site. This system could have some degree of insulation, as well as windows and doors applied at the factory. The General Houses Company utilized this method of prefabrication.[74]

Borrowing from methods used to produce airplane wings, a stressed skin prefab structural system employed plywood sheets that were fused over a structural frame, or "box girder" to create both the interior and exterior wall surfaces. The plywood or other sheet material formed a rigid structural system within the modular unit. Stressed skin plywood structural systems advanced mass production techniques for prefab houses. This process produced a very strong structural unit that provided insulation. Windows and doors could be embedded in these panels at the factory to facilitate the prefabrication process. This type of panelized unit also came finished on the interior

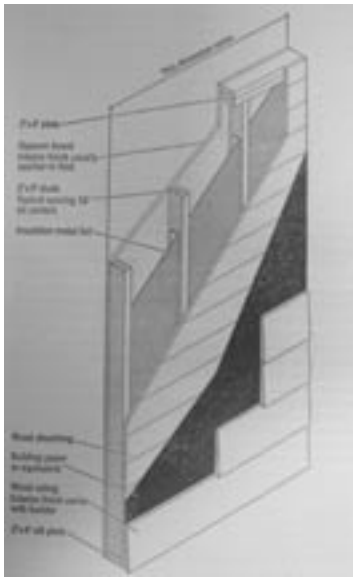


Diagram of an open frame panel. This type of panelization creates a unit of framing members (Source: The Prefabrication of Houses).

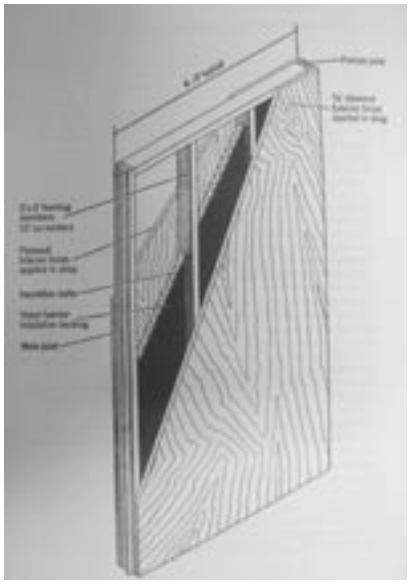
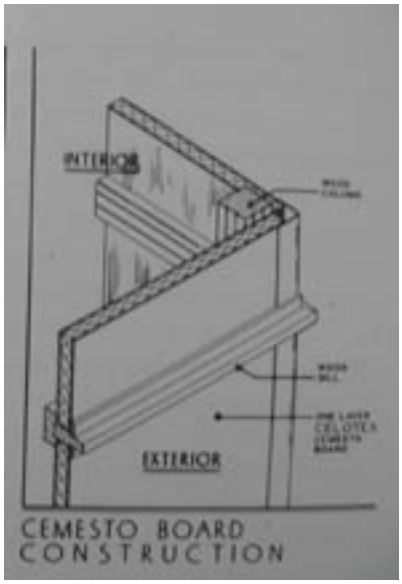


Diagram of a stressed skin panel. Companies like Gunnison and National used these types of panels in their prefab houses. (Source: The Prefabrication of Houses).



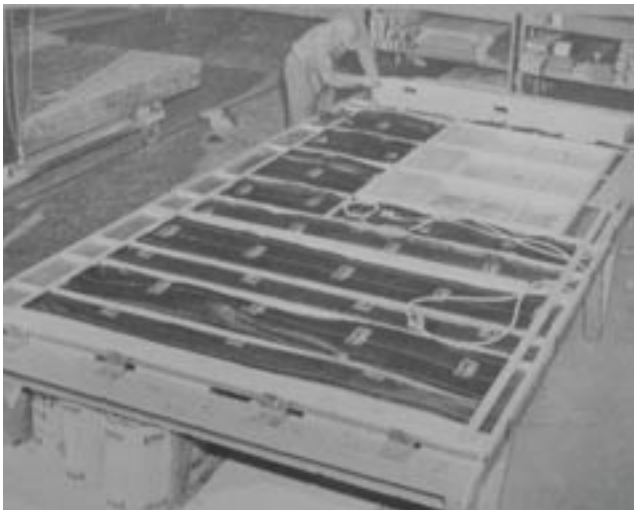
An example of solid panel construction. (Source: The Prefabrication of Houses).

and exterior walls, though additional exterior sheathing such as weatherboard could be applied at the building site to further protect the structure.[75] Prefab companies that utilized this method include Gunnison, Peaseway, and National.[76]

Solid panel prefab structural systems consisted of units that were made of a homogenous material like precast concrete slabs. Other solid panel types were made from laminated plywood panels or asbestos cement. This type of system was sometimes combined with other structural systems for greater reinforcement. Therefore, the solid panel acted as a sheathing material rather than a structural system. Cemesto Homes and Hayes Econocrete were companies that produced prefab houses with this method.[77]

Sectional assembly and preassembled prefab houses involved more than just the manufacture of the structural system, but the assembly of the complete housing units at the factory including windows, doors, trim, wiring, and plumbing. The structural systems of these prefab types generally consisted of panelized units that were assembled into larger components. Companies that offered sectional house systems manufactured room size units, which were joined at the home site. Manufactured and finished at the factory, preassembled prefab houses offered a completely finished unit when delivered to the building site. Manufacturers associated with sectional and preassembled prefab housing include Wingfoot, Reliance, and houses produced by the Tennessee Valley Authority (TVA).[78]

Assembling sectional prefab housing at the Reliance Factory. (Source: The Prefabrication of Houses).



Sectional and preassembled prefab houses often came complete with wiring, plumbing, and appliances. By completely preparing the house before it arrived at the site, the prefab was ready for immediate occupation. (Source: The Prefabrication of Houses).

Direct right: A preassembled Wingfoot prefab house. Note the extended portion of the house at the left, this section folded in while the house was being transported to the site. (Source: The Prefabrication of Houses).

Materials

The vast majority of prefabs were constructed with wood using either dimensional precut lumber or plywood. In 1962, for example, 85 percent of prefab manufacturers used wood as a structural material. The availability of lumber and the ease of production made it an attractive material for the prefab industry in all eras. Kit house manufacturers utilized dimensional lumber as the principal material in their precut house models.[79]

The development of plywood by the U.S. Forest Products Laboratory advanced prefab house construction during the 1930s. Plywood consists of several thin layers of wood that when glued together form a large sheet. These plywood sheets had the advantage of being light and strong, while also durable and inexpensive. Plywood could easily be mass-produced in standardized 4-foot by 8-foot sheets.[80] The large sheets of plywood enabled prefab manufacturers to develop panelized structural systems. The modular plywood sheets allowed for quicker construction because of the large surface area. In particular, prefab manufacturers created a system of "stressed skin" using plywood. The ability to construct an inexpensive standardized unit with interior and exterior walls in place provided an advantage to panelized prefabrication. Panelized producers could shorten the construction time at the house site since the wall units were already finished.[81]

Using plywood to produce panels led to many advances in the prefabrication industry because it led to quicker assembly at the house site. (Source: The Prefabrication of Houses).

Though steel structural systems became popular for commercial construction early in the twentieth century, most prefab house manufacturers chose not adopt the material. Several inherent disadvantages reduced the appeal of steel for prefab housing. Steel was prone to heat loss, condensation, rust, and sound transmission. The high strength of steel made it suitable for skyscrapers where the structural load of the building was immense. For small one- to two-story houses, the use of steel did not maximize the material's full strength, therefore

All of the parts needed to assemble a Lustron house are shown above. The porcelain-enameled steel panels and steel frame fit together to make the building envelope. (Source: The Lustron Home: The History of a Postwar Prefabricated Housing Experiment).

making it excessive for such small structures.[82] Additionally, the public's perception of this industrialized material did not initially meet with overwhelming appeal.[83]

Steel did have a low cost, which made it attractive to some manufacturers. By the 1920s, there was experimentation with steel as the primary structural material for smaller commercial buildings such as hamburger stands and gas stations. Porcelain-enameled steel panels were developed as a way to protect the steel from rust. Coating the steel with a porcelain-enamel finish provided a durable, attractive panel. Porcelain-enamel had been successfully used for refrigerators, washing machines, and bath tubs. Applying the coating to steel allowed for a variety of colors to be used as an exterior finish. A few prefab manufacturers did incorporate steel in their houses either as structural framing members or porcelain-enameled steel panels. Lustron houses were probably the best-known prefabricated housing to utilize porcelain-enamel steel panels in their production.[84]

The use of concrete in prefabs met with limited success. Sears actually featured house models constructed with concrete block. A machine could be purchased through the catalogue to fabricate the concrete blocks on the house site. Offered in different textures and dressings, concrete blocks replicated stone masonry.[85] Concrete block made from Sears block machine was most often utilized on the foundation walls of many houses, prefab and conventionally built, throughout the early-to-mid-twentieth century.[86]

Sears House model no. 52 featured concrete block as its principal construction material. (Source: Houses by Mail).

Precut customers could produce their own foundation or cladding material by using the Sears concrete block machine which formed masonry units with a variety of textures. (Source: Cheap, Quick, and Easy).

Putting the final prefabricated element on the concrete house manufactured by the Ibec Corporation. This prefab company used precast concrete panels for its houses. (Source: A Practical Guide to Prefabricated Houses).

Some prefab manufacturers experimented with precast concrete either in site-poured forms or panels. The disadvantage of prefab concrete houses was the high delivery costs due to the weight of the material. The most cost-effective method for prefabricated concrete dwellings occurred only if the construction was near the production site. Precast concrete prefabs, though modern in appearance, did not appeal to general public tastes as an acceptable domestic material.

Construction of prefabricated houses reflected both the need to fit into traditional building methods and the desire to showcase new and modern materials. The interest in using precut lumber systems relied on the public familiarity with the construction method for light timber framing. By precutting the dimensioned lumber at the factory, prefab manufacturers created a modern and efficient production method. The precut house then could be assembled by anyone with a fundamental knowledge of carpentry.[87] Alternatively, the use of modern materials to construct prefab houses underscored the idea that the twentieth century dwelling should be an industrialized product. By using materials like plywood, steel, and precast concrete, the prefab house could symbolize a modern domestic form for the new century.[88]

Architectural Style and Design

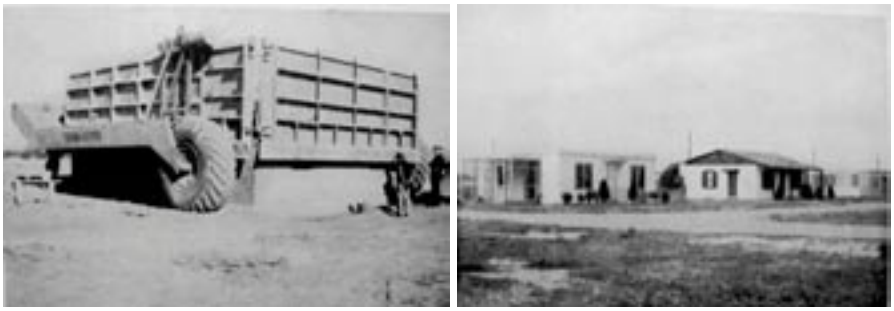
Prefab manufacturers generally maintained in-house architectural and engineering staff to design their houses. The focus was not only to create attractive, marketable houses but also to reduce waste of materials and labor-costs through efficient design. Architects had to be knowledgeable about production methods used to create the prefab house, so that they could plan to maximize materials and streamline assembly methods with their designs. By using architects to design the houses, prefab house manufactures subtly communicated to the consumer that the prefab house was of comparable quality to the conventionally constructed home.[89]

Mail-order catalogues from the early twentieth century are filled with precut houses in Bungalow and American Four Square styles. The in-house architectural staff for mail-order companies usually chose to emulate popular designs rather than create new ones.[90] As a consequence of this replication, many kit houses were indistinguishable from their convention-

Variety of precut models featuring popular architectural styles offered by the Aladdin Company through several decades. (Source: Central Michigan University Aladdin Homes Archive).

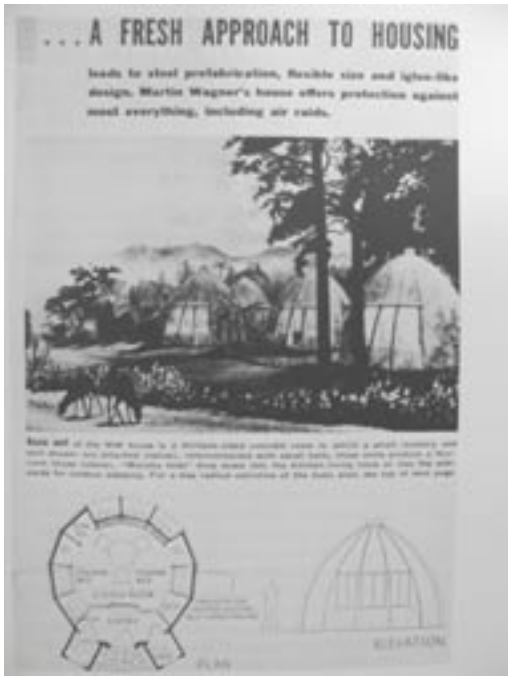
ally built neighbors. Other fashionable styles that became popular for precut prefabricated houses included the revival styles in Colonial, Tudor, Mediterranean, and Georgian motifs, as well as the Prairie style. Again, these styles had become favored during early decades of the twentieth century, so the kit-house manufacturers consciously appealed to market tastes by offering the most popular designs.

During the transitional period of the 1930s, architects in the industry felt that prefabs should reflect a modern design since these houses were products of industrialization. Driven by the availability of modern materials like steel and precast concrete, several companies offered houses with modernistic forms. These dwellings featured flat roofs, minimal ornamentation and open floor plans. The American Houses Company under the direction of Princeton-trained architect, Robert W. McLaughlin, Jr. produced the steel "Motohome." General Houses, founded by Harvard-trained architect Howard T. Fisher, also developed modern styled steel prefabs.[91]



Above: The "Motohome" and a General Houses steel prefab. Thoroughly modern in style, these houses were not readily embraced by consumers. (Source: The Prefabrication of Houses).
Left: The Tournalayer machine produced entirely precast prefab houses. A development of LeTourneau homes is pictured. Notice that one house already has a gable roof added to it, showing the reluctance of homeowners to accept modern architectural forms. (Source: A Practical Guide to Prefabricated Houses).

Above: Buckminster Fuller's Dymaxion House made of aluminum. Despite public interest in the innovative project, Fuller's prefab never was mass-produced. (Source: The Prefabrication of Houses).



Above: Taking prefabricated housing to the extreme. This company's product did not catch the public's imagination. (Source: Dream of the Factory Made House).

Right: The Cemesto House produced by the Celotex Corporation used solid panels to enclose the building envelope. (Source: Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places).

LeTourneau Homes based in Texas produced an entirely precast modern home from the "Tournalayer" machine.[92] The Lustron house, an all steel prefab house, also typified a modern aesthetic with its use of industrial materials. Though the floor plans were based on a bungalow, Lustrons were thoroughly modern in appearance.[93]

Architects and designers also experimented with avant-garde or non-traditional designs. The most notable unorthodox prefab design was Buckminster Fuller's Dymaxion House. He designed the prototype for the house in 1927 employing a lightweight aluminum structure suspended from a central mast. The round form of the house radically departed from the traditional concept of domestic dwelling.[94] Although it received wide publicity, the Dymaxion House and Fuller's later Wichita House (based on a similar design) never became more than a prototype model.[95]

Prefab manufacturers hoped to gain consumer acceptance for their products in the post-World War II period. As a consequence of the World War II prefab defense worker housing and the manufactured mobile home, prefab dwellings had developed a stigma that they were cheaply constructed, unattractive, and temporary. Additionally, some of the modern materials used in prefab production met with public doubt. For example, the use of stressed

Panelized prefab manufacturers like Gunnison (left) and Peaseway (right) offered houses in traditional styles with Colonial Revival and Cape Cod designs. (Source: A Practical Guide to Prefabricated Houses).

skin plywood panels for interior and exterior sheathing caused concern that the material would not be durable.[96] Prefab manufacturers in the postwar period of the 1940s and 1950s consciously sought to overcome the negative public attitudes toward these house types. Most prefabs during this time appealed to traditional design tastes and materials, as a result.[97]

Though experimentation with prefab house styles provided some interesting models, the market demand for traditionally styled dwellings dictated the designs of prefab models.[98] Most prefab manufacturers in the post-World War II period produced single-story Cape Cod or ranch styles.[99] Even the more strictly modern styles were abandoned in favor of familiar domestic forms.[100] Just as precut houses from the early twentieth century assimilated with conventionally built dwellings, mid-century prefab houses became virtually indistinguishable from tract housing. Some prefab houses not only employed traditional styles, but also the same materials used for conventional dwellings. The only difference was that the prefab was constructed in a factory for a more economical cost.[101]

Flexibility in design and production methods as a result of using standardized parts allowed for prefabs to be customized. Kit house producers encouraged potential buyers to design the house to their tastes. This resulted in numerous alterations to the original designs in the mail-order catalogues. Floor plans could be reversed, fenestration rearranged, dormers added, rooflines altered and even blended designs of two houses. The varying degree of customization for kit houses created individually designed dwellings despite standardized methods.[102]


Extra Features Obtainable for ALADDIN Houses

Aladdin, like many precut manufacturers offered several special features to add to their houses. (Source: Central Michigan University Aladdin Homes Archive).

Above: National Homes featured many different options to individualize their prefab houses. (Source: Private collection).

Panelized prefab houses also offered customization in design. False gables, long shutters, and special entrance details could be added to the basic house design for an extra cost.[103] For example, Gunnison Homes included numerous add-ons and architectural elements to allow for individual taste.[104] Panelized houses like Gunnison Homes also featured flexibility of design even after construction. The panels could be snapped out of place and rearranged to suit a property owner's whim. This meant that the arrangement of windows and doors could reportedly easily be changed, if desired. Prefab manufacturers advertised this as an advantage over conventionally constructed houses, which would require costly renovations to achieve the same results.[105]

Some Gunnison additional features included the screened porch with removable panels (top) and the "Wind-O-Wing" that was a room extension (bottom).

Prefab manufacturers consciously designed their houses to address popular architectural styles of the period. Prefab companies had a keen interest in producing houses that would be attractive to potential buyers and would increase company profits. Some manufacturers did, however, experiment with unorthodox designs and non-traditional materials like concrete and steel. Predictably, given that the idea of a factory produced house seemed foreign, these houses did not have the mass appeal of the more conventional styles. The motivation for emulating common styles continued into the postwar period when prefab manufacturers were concerned with improving the image of their houses.[106]

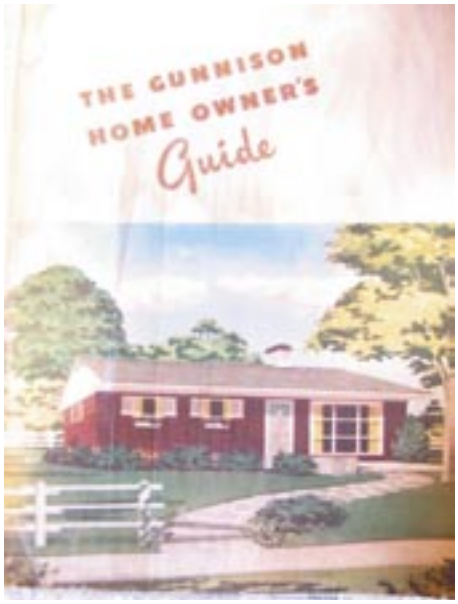
Marketing

With the advent of rural free delivery mail service in 1896, prospective customers could be reached nationwide. In general, initial marketing of prefab houses was accomplished through mass advertising in magazine ads or through self-published catalogues. Companies like Sears and Montgomery Ward already had experience with marketing through catalogues, which put information about products directly into the customer's hands. Mail-order prefab house purveyors published catalogues on a yearly basis, updating house models to refresh the inventory. Sometimes, the models were renamed, while other house plans would be discontinued.[107]

The marketing technique of catalogues continued as the industry changed from precut prefabs to panelized, sectional, and preassembled prefabricated houses. For example, Gunnison Homes and National Homes both produced color catalogues and informational brochures showcasing the variety of plans offered by the companies. Trade journals like *The Architectural Forum* and *Fortune Magazine* also featured articles about prefabs to targeted groups. Overall, catalogues and brochures were the most direct way to get information to the general public about the availability and cost benefits of prefab houses.[108]

An alternate method to educating the public about the advantages of prefabricated housing came through exhibits. Coming at a time when prefabricated housing was transitioning from precut to panelized, sectional, and preassembled production methods, the 1933 Century of Progress World's Fair in Chicago featured an exhibit for the "House of Tomorrow." The Fair offered an opportunity to experiment with new materials and educate fairgoers about new domestic possibilities. This was the first organized public exhibition for prefabricated houses showcasing modern materials and panelized models.[109] Not all of the prototypes were prefabricated, but there were three steel prefab houses from General Houses, Armco-Ferro

Aladdin advertised in popular magazines of the day as well as distributing their own catalogues to reach potential precut house customers. (Source: Central Michigan University Aladdin Homes Archive).



Panelized prefab manufacturers also relied on print media to advertise their products. Gunnison sought to entice prospective home-buyers with its catalogue. (Source: Private collection).

The Armco-Ferro House from the 1933 World's Fair exhibit "The Houses of Tomorrow," as it stands today. The house is being preserved by the National Park Service at the Indiana Dunes National Lake Shore. (Source: Historic American Buildings Survey. Photographer: Jack Boucher).

Enamel House, and Stran-Steel Corporation as well as Rostone Corporation's precast synthetic stone house on display.[110] The designs of these prefab houses were quite modern with flat roofs, steel windows, and minimal ornamentation. The exhibition organizers hoped to imprint the possibilities of modern prefabricated houses into the public consciousness. Unfortunately, the World's Fair exhibit did not meet with the anticipated public enthusiasm, as consumer preference still favored precut houses using traditional styles and materials.[111]

Prefab manufacturers also sought ways to market their houses through dealers. This allowed for face-to-face salesmanship for the products. Some precut producers established sales offices to assist the purchaser with assembling the house. For example, Sears opened regional offices across the country. These offices functioned to assist the homebuyer with construction details after the house had been purchased.[112]

In the 1940s, Foster Gunnison, founder of Gunnison Homes, instituted the dealer method for marketing prefab houses.[113] The dealer served as the point of purchase for the prefab house as well as the building contractor and mortgage agent.[114] This method offered one-stop shopping for the consumer, making the purchase of the prefab even more efficient. Often times the dealer had a model house or display house available for the prospective house buyer to tour. The model house allowed the dealer to highlight the numerous features and advantages to prefab house ownership. Model houses also gave the potential homebuyer the opportunity to inspect the finished product in detail. The customer could also ask questions and request changes directly to the dealer instead of waiting for an answer from the company's headquarters.[115]

In some cases, prefab manufacturers in the post-World War II period marketed their products directly to land developers involved in speculative real estate. The developer could purchase a quantity of prefab houses and construct them on subdivided land.[116] Contractors had the advantage of being able to reduce costs by coordinating the construction process from the foundation to the sale of the house. Prefab manufacturers benefited from this method of sales because they could anticipate large orders, which reduced production costs.

In areas where housing shortages were acute, a developer could construct prefabs at a faster rate for less expense than conventionally built houses.[117]

Distribution

In the early-twentieth century, precut house companies utilized the extensive network of railroads that reached across the United States to ship their products. Taking one to two railcars each precut house package was delivered to the rail station nearest the house site.[118] The purchaser was charged with the responsibility of getting the building materials to the site. Oftentimes, the homeowner brought a vehicle or horse and cart to the delivery point to carry the materials to the house site. While railroads had extended coverage across the United States, they were limited in delivery points. As a result of this, prefab houses manufactured during this period were often located near railroad tracks, especially since hauling the unloaded kit house a great distance by horse and cart or some alternate vehicle could be a formidable task for the purchaser.[119]


HERE'S HOW
YOUR
ALADDIN HOUSE
IS
SHIPPED

Railroad cars were used to ship precut houses across the nation. The extensive network of railroads provided a broad distribution area for prefab manufacturers. (Source: Central Michigan University Aladdin Homes Archive).

As the highway system became increasingly developed by the mid-twentieth century, truck transport emerged as an acceptable solution for delivering prefab houses. Trucks could carry the prefab package from the factory directly to the building site. Companies had specially designed trucks that organized the house parts for systematic unloading at the building site. The issue of distribution cost, however, kept truck delivery within a 300-mile radius from the factory site. This accounts for the variety of regional prefab manufacturers across the country. Unlike kit houses from the earlier era that could be found dispersed throughout the nation, mid-century prefabs, especially from the smaller manufacturers, were likely to be found in areas within range of the manufacturing plant.[120]

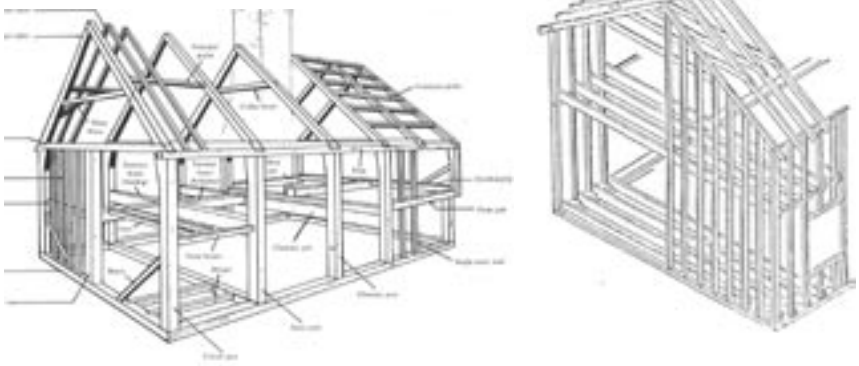
The improvement of highways in the post-World War II era gave prefab manufacturers direct routes to customers. The prefab house could be delivered directly to the building site. (Source: The Prefabrication of Houses).

Prefabricated Property Types

With an understanding of the historical, cultural, and industrial processes that contributed to the development of prefabricated houses during the twentieth century, a closer examination of the principal property types associated with this domestic architectural phenomenon is required. The major property types for prefabricated housing include precut, panelized, sectional, and preassembled houses. The following sections briefly describe the development of each type, provide examples of companies associated with each type, and gives suggestions for identification of prefab property types in the field. Since there are two distinct periods of prefabrication—the early twentieth century precut houses and the mid-century panelized, sectional, and preassembled prefabs—the identification sections will follow at the end of the text that describes the property types associated with these two periods.

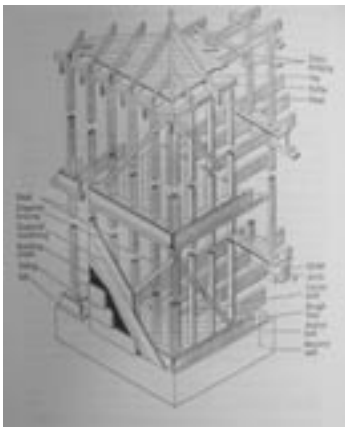
Brief History of Precut Houses

The invention of the balloon-frame structural system set the stage for precut house development. Developed in Chicago in 1833, the balloon-frame system utilized 2-inch by 4-inch light-weight, dimensional lumber for the building structure. Each of the light timber balloon-frame studs carried the building load and extended two stories in height. This construction method is sometimes referred to as a "stick-built" structural system. Benefiting from the introduction of manufactured nails and the increasing number of sawmills for timber processing, balloon-framing offered an alternative to traditional building methods like post-and-beam construction and log construction. Balloon-frame buildings



Left: Diagram showing braced timber framing used to construct houses prior to the wholesale adoption of balloon framing.

Right: Illustration of balloon framing. Note how the 2' x 4' light studs extend to the second story.
(Source for both: America's Favorite Homes).



Above: Diagram of platform framing, which used the same light timber as balloon framing. The difference is that the studs only extend one floor. (Source: America's Favorite Homes).

facilitated construction because it required less intensive labor than traditional carpentry methods.[121]

The balloon-framing system was modified by the beginning of the twentieth century and became known as "platform" or "western" framing. Platform frame systems used the same light timber, dimensional studs for the overall structure. The key change to platform framing was that the studs only extended one floor. If a second story was needed, an independent system of framing studs was placed on the platform between the first and second story. Precut manufacturers enlisted the platform framing method for their kit houses.[122]

Precut manufacturers use of the steam-powered saw also greatly enhanced the ability of mills to efficiently cut dimensional lumber in large quantities. Power tools were not widely available at this time, so on-site carpenters had to hand saw framing elements. When lumber cut at mills could be delivered to the site in uniform sizes, it greatly reduced the labor needed at the building site.[123]

Before the introduction of the precut system, conventionally built houses had to be constructed piece by piece at the building site. Even with the introduction of balloon and platform light timber framing, the process of building a house was very labor-intensive. Conventional construction methods involved cutting, nailing, and finishing each stud, joist, rafter on-site by hand craft production. Cutting individual pieces of lumber at the site created wasted materials from bad cuts, odd ends, and sawdust. The amount of wasted lumber was estimated to be at least 20 percent.[124] Houses constructed by conventional methods also required large crews of carpenters.[125]

One of Aladdin's manufacturing facilities. Precut houses were produced on an assembly-line with each worker assigned to a specific task in the manufacturing process. (Source: Central Michigan University Aladdin Homes Archive).

Within the prefabrication industry, precut houses were the first major type to develop in the early twentieth century. Precut manufacturers incorporated an assembly-line method of production by cutting the lumber at the factory. The advantage of the precut method, claimed by the kit house manufacturers, was the reduction of wasted lumber and labor. This meticulous attention to eliminating wasted lumber was touted in the catalogues as a cost savings feature of a precut house. The precutting of the lumber saved labor costs at the build-

Right: Precut manufacturer advertised that the advantage of their prefab houses was the cost savings from reduced waste in materials. (Source: Central Michigan University Aladdin Homes Archive).

ing site since the lumber was already at the desired length to begin construction. Additionally, the volume of houses produced through mass production methods allowed companies to purchase materials at a reduced cost. This savings was theoretically passed on to the customer by selling the houses at lower prices than conventionally built dwellings. Precut houses were promoted as a quicker and cheaper way to build a house, because the lumber had already been processed and was ready to use.[126]

Above: The "Bluebird" was one of the modest-sized precut houses offered by Aladdin. Note that there were three different plans but all have the same exterior dimensions. (Source: Central Michigan University Aladdin Homes Archive).

Precut houses, also referred to as "ready-cut," "mail-order," or "kit" houses, offered prospective homeowners a variety of floor plans and architectural styles. A standardized base plan determined the amount of lumber needed. Designers calculated the measurements of each framing member to maximize a single piece of lumber. The standardized lumber was then numbered to key the individual pieces with the plans that were sent with the package. Also included in the bundle were the windows, doors, trim, nails, and paint that completed the kit. The kit materials were numbered, so that the house builder just had to follow the instructions for assembly. Mail-order houses were also shipped with clapboard siding or shingles rather than brick, which was too expensive to ship. If the customer wanted an alternative exterior cladding instead of clapboard siding, the homeowner would have to purchase materials locally. Brick or stone could easily be applied to the framed kit house. Precut houses also did not include foundation materials in the kit. The homeowner had to prepare the foundation before the house package arrived at the site. Foundation materials varied from stone to concrete block, or brick.[127] In some cases, precut home owners used the Sears block machine to construct concrete building foundations.

Marketing the prefab house of the early twentieth century primarily took place in mail-order catalogues. The enactment of the federal Rural Free Delivery Act in 1896 allowed for mass-distribution of catalogues through the postal service.[128] Designs were also featured

in popular magazines of the day like *The Ladies' Home Journal* and *The Saturday Evening Post*. Some manufacturers eventually established regional sales offices to market the houses to potential homebuyers.[129]

Distribution of precut houses started with the network of rail lines across the country. The packaged houses could be shipped anywhere in the country by rail from the factory. Kit houses were loaded on rail cars and delivered to the new owners for a reasonable shipping cost. In some cases, owners were able to have the train stop near the building site so that the materials could be unloaded. Generally though, the house materials were delivered at the train station and it was up to the owner to get the materials to the site.[130]

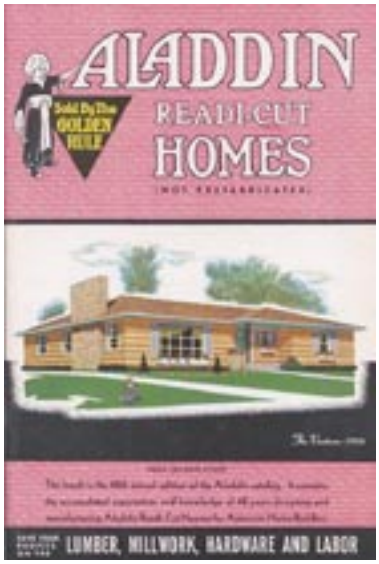
Based on popular designs of the day, precut houses can be somewhat difficult to distinguish from conventionally built neighbors. The precut era spanned several decades, so no one distinguishing style is associated with precut houses. Architecturally, kit houses emulated the popular designs of the period ranging from Bungalows, American Foursquares, Colonial Revival, Tudor Revival, and Minimal Traditional styles, which could all be found among precut manufacturer's catalogue pages.[131]

Principal Precut Manufacturers

The term "Sears House" is often used generically to describe kit houses or precut type houses. This is not entirely accurate since a variety of manufacturers produced precut houses. Sears is certainly the mail-order manufacturer with the highest profile, but not necessarily the most enduring. For instance, Aladdin Homes were produced and available until approximately 1981.[132]

It is not unusual to find similar precut house models offered by different mail-order companies, since they often copied plans. Local lumber companies also offered precut houses. These local lumber companies and builders would buy a single plan and duplicate it with their own materials.[133] As might be imagined, this makes positive identification of the specific precut house manufacturer somewhat difficult.

The milling and cutting of lumber at a factory, along with standardized plans and designs, is the unifying characteristic of precut kit houses. Until World War II, precut houses dominated the prefab industry with 250,000 homes constructed by 1943.[134] Examples of precut house companies include Sears, Aladdin, Wardway, Gordon-Van Tine, Lewis/Liberty,

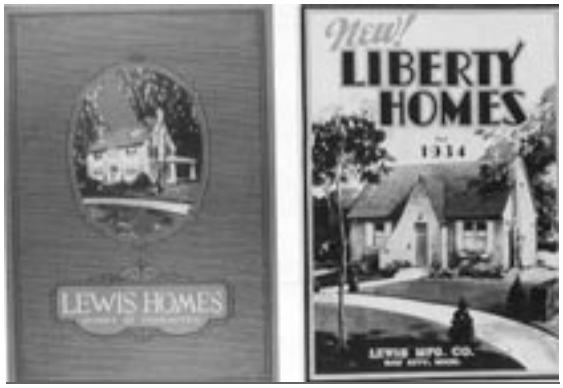


Above: Aladdin remained successful into the mid-century by offering modern Ranch house designs. This is the 1954 catalogue. (Source: Central Michigan University Aladdin Homes Archive).

and Sterling. The following paragraphs highlight the major precut manufacturers during the twentieth century.

Aladdin Company, Bay City, Michigan 1906 – 1981

Brothers William and Otto Sovereign of Bay City, Michigan founded the Aladdin Company in 1906. Bay City had an established lumber and ship building industry in place by the time the Sovereign brothers created their company. William and Otto Sovereign were said to have been inspired by a Bay City mail-order, precut boat company.[135] Aladdin initially sold precut "knock-down" summer cottages. By 1911, Aladdin offered 41 different types of permanent prefab houses in Craftsman and Bungalow styles.[136] Using materials supplied by both Lewis Manufacturing and International Mill and Timber of Bay City, Aladdin created the "readi-cut" system. By 1917, the company was selling 3,000 homes a year on a cash-only basis. The success of the company was reflected in the opening of new manufacturing plants in Oregon, North Carolina, Mississippi, and Canada. The Aladdin Company continued to expand their line of prefabricated houses through the boom years of the 1920s.[137] The Depression and World War II slowed sales considerably to just a few hundred units per year. In the postwar ear of the 1950s, Aladdin regained sales by offering precut models in the popular Ranch style. Despite this initial upswing, the decades of the 1960s and 1970s, Aladdin saw a dramatic decrease in house sales. The company's operations ceased in 1981 after selling about 100,000 homes throughout the United States, Canada, England, and Africa.[138]



Above:The Lewis-Liberty Company offered precut houses in familiar styles. (Source: America's Favorite Homes).

Lewis-Liberty, Bay City Michigan 1913 - 1973

Lewis Manufacturing Company began producing their own line of homes in 1913, using some of the designs they had created for the Aladdin Company.[139] The company president Miss Adna G. Lewis started out working as a bookkeeper for a lumber mill. She expanded the company's operations from precutting lumber for other companies like Aladdin to offering Lewis Manufacturing Company's own line of precut designs in 1914. Catalogues under the company name

"Lewis-Built Homes" featured over one hundred prefab designs in the "Easy Built" line including bungalow and cottage styles.[140] By the 1920s, the company introduced the less-expensive "Liberty Homes" product line. The company survived the housing downturn of the Depression and World War II producing precut houses into the 1970s. Lewis-Liberty went bankrupt in 1973, after selling about 60,000 homes.[141]

Sterling, Bay City Michigan 1915 - 1975

Scant information is available for this Michigan based company. Sterling intermingled operations with both Aladdin and Lewis-Liberty over the course of its existence. In 1915, International Mill and Timber, which previously produced precut materials for the Aladdin Company introduced their own designs under the name Sterling Homes. Bay City Historical Society Researcher, Dale Wolicki recounts a series of difficulties that Sterling faced. "The Sterling plant was destroyed by fire in 1917; the company went into bankruptcy post World War I and was purchased in 1920 by a local lumber dealer, Leopold Kantzler. The facilities were again destroyed by fire in 1925, and after rebuilding, Kantzler took the name "Liberty Homes" for the manufactured housing division."[142] Prefab house designs offered by the company included Bungalows, Colonial Revival, and Ranch styles, reflecting the fashionable tastes through time. Sterling's last catalogue was published in 1971 and officially ceased operations in 1975.[143] When Sterling closed, the company had sold about 35,000 homes nationwide.[144]

Above: Sterling Homes had a nation-wide distribution, yet little is known about the types of houses the company produced. (Source: America's Favorite Homes).

Gordon-Van Tine, Davenport, Iowa 1907-46

Gordon-Van Tine Company initially began operations as wholesale building-materials supplier U.N. Roberts Company in 1865. In 1906, the U.N. Roberts Company merged with another firm to create the Gordon-Van Tine lumber company for direct sales of millwork to the customer.[145] During these early years, Gordon-Van Tine supplied building materials to other mail-order companies such as Sears.[146] Gordon-Van Tine introduced its "Ready-Cut" precut home line in 1910 through the company's own mail-order catalogue. The business proved to be a success and by 1920, Gordon-Van Tine operated mills in Iowa, Washington, Missouri, and Mississippi. The widely dispersed geographic locations of the mills enhanced

Above: A Gordon-Van Tine Company catalogue showing one of the many precut houses offered. (Source: America's Favorite Homes).

Right: One of Gordon-Van Tine's precut bungalows. Note that it is the same house as Wardway's "Buena-Vista" bungalow pictured at the bottom of this page. (Source: 117 House Designs of the Twenties).

Gordon-Van Tine's ability to offer prefabricated houses across the nation. Typical of the precut prefabricators, Gordon-Van Tine's house designs reflected the popular architectural styles of the time by featuring Bungalows and American Foursquares.[147] Gordon-Van Tine also offered mortgages on a limited basis from 1927 to 1931. Though the company survived the Depression, it ceased operations in 1945. Exact sales figures for Gordon-Van Tine have not been determined, but the company did have a national presence.[148]

Above: Montgomery Ward Company's "Wardway Homes" sought to compete with its rival Sears. (Source: America's Favorite Homes).

Wardway Homes, (Montgomery Ward) Chicago Illinois 1910-31

The Montgomery Ward Company first introduced house plans in 1910 without supplying building materials. Wards apparently never owned or operated housing production facilities, but instead contracted with mills in Missouri, Iowa, Washington, Mississippi, and Louisiana.[149] Beginning in 1917, Gordon-Van Tine provided the materials for homes marketed by Montgomery Ward in their pattern book catalogues, though not as a single package. It was not until 1921, when Gordon-Van Tine partnered with Montgomery Ward to create a mail-order housing operation that Ward offered both precut house plans and materials in a single package. Like Sears, Montgomery Ward offered mortgage financing with the company's kit houses.[150] The brand name "Wardway Homes" was used from 1922 until 1931, featuring the "ready-cut" system. Wardway Homes were identical to Gordon-Van Tine homes from corresponding years except that the names were different and Montgomery Ward's houses were more expensive. Wardway Homes did not survive the Depression era, closing in 1931. Exact sales figure have not been determined, though, the company did have nationwide distribution.[151]

Far right: Wardway's "Buena-Vista" bungalow is the exact same house as Gordon-Van Tine's bungalow pictured above. This illustrates that Wardway occasionally used other precut manufacturers designs. (Source: Wardway Homes, Bungalows, and Cottages, 1925).

Top picture: Sears' "Alhambra" house featured Mediterranian Revival styling. (Source: Houses by Mail).
Bottom picture: Sears' "Dover" was a popular model in the 1930s. (Source: Sears House Designs of the Thirties).

Sears, Roebuck and Company, Chicago Illinois 1908-51

Established in 1886, Sears started as a mail-order catalogue company for house wares, clothing, tools, and building supplies. The company entered the mail-order house business in 1908, offering a "Modern Homes" catalogue with 40 different house designs. The price included plans and most building materials.[152] Gordon-Van Tine provided materials initially, but with the success of the catalogue sales Sears began operating its own lumber mills. Sears purchased its first lumber mill in Mansfield, Louisiana in 1909, and a second mill at Cairo, Illinois in 1911 (across the Mississippi River from Wickliffe, Kentucky, in the Purchase region). By 1912, Sears purchased a millwork plant in Norwood, Ohio.[153] In 1916, Sears began marketing precut houses coupled with mortgages in hopes of attracting customers who did not have the cash to purchase Aladdin or Gordon-Van Tine precut homes. Sears discontinued mortgage financing in 1933 after experiencing great financial losses due to numerous foreclosures from kit house customers. Sears continued to market precut homes until 1940, but sales dropped precipitously. Sears sold an estimated 70,000 homes from 1908 to 1940.[154] In the post-World War II period, Sears attempted to market a limited number of prefabricated models that used both precut and panelized structural elements under the brand name "Homart." These did not seem to have popular appeal, and were discontinued in 1952.[155]

Identifying the Precut Property Type

One of the inherent characteristics for most prefabricated housing is that it blends in with conventionally constructed houses, especially with regard to the precut house type. This quality makes prefab houses nearly indistinguishable from houses that are custom or speculatively built. In the case of precut house types, manufacturers emulated popular house designs of the period including Bungalows, American Foursquares, and Colonial Revival styles. From the exterior a precut house cannot be identified. Even with the assistance of field guides like *Houses by Mail*, or *Finding the Houses that Sears Built* verifying that a particular resource is associated with a precut manufacturer cannot be guaranteed.

Through the course of the research for this study, it was determined that to conclusively identify a precut property type, more intensive research methods are required. This includes interior investigation of the resource to confirm the floor plan and measured drawings. Gaining access to the interior can verify whether a particular house's plan matches the original floor plan. Keep in mind that many precut manufacturers and local lumber companies copied house designs (with slight variations), so a plan could be copied again and again by different companies. Additionally, precut manufacturers allowed for floor plan customization, so a home owner could flip the plan within the manufacturer's prescribed building footprint. So, although the precut house plan could be altered originally, the building footprint is always a standard size. Measuring the exterior dimensions and comparing them with the published drawings dimensions, then, is a pretty conclusive method for identification. Additionally, interior investigation can help to find manufacturer's shipping labels and stamps on the structural materials. Floor joists in basements and exposed rafters in attics should have numbers or letters stamped on the face and butt-end of the structural member. Shipping labels can sometimes be found on the back of stair carriages or doorjambs.

Though not carried out for this report because of time constraints, additional research on deeds and mortgages might verify that a resource is a precut house. Deed and mortgage records sometimes yield information about the origins of a particular property. According to precut house historian Rosemary Thornton, Sears provided mortgages from 1915 to 1933. Grantors will be listed as one of the trustees representing Sears. The names of either Walker O. Lewis or Nicholas Wieland will usually be included on the deed as grantor, if the house is a Sears prefab.[156] Building permits also might contain information about the architect. Precut manufacturers listed architects by company names on these records such as "Sears Roebuck" or "Aladdin." It is important to remember that not all precut associated properties will have this information listed in the archival records. [157]

Sanborn Maps and Plats can assist in the identification of neighborhoods that developed during the period of precut house popularity. As a general rule, neighborhoods developed in the period of 1900–1940 would be the areas to look for precut houses.[158]

There are several field guides and reprints of catalogues (listed in the bibliography) available to assist in the identification of mail-order houses. Analyze architectural characteristics and patterns found on individual models to assist in initial identification of a particular house. Look for the placement of chimneys and windows and compare to the models shown

The center block circled above is a detail that Gordon-Van Tine used on some of their houses. Also note the decorative stick work on the columns. Precut manufacturers sometimes used distinctive combinations on house models.

in the guidebooks.[159] Mail-order manufacturers sometimes used distinctive details that can help distinguish a kit house. Sears used five-piece eave brackets and decorative stick work on columns.[160] Gordon-Van Tine sometimes placed a center block on the porch fascia piece for the house number to be placed.[161] Keep in mind that alterations to the published version may have occurred when the house was constructed because of customization. However, customizing the house, whether by flipping the floor plan or through altering the fenestration pattern, will never alter the basic dimensions of the building footprint. So, measurements are a very certain way of confirming the manufacturer of a precut house, according to most precut historians. Foundations for precuts can be concrete block, brick, or poured concrete. Exterior cladding also ranged from horizontal clapboard siding, shingles, face brick, stucco, and concrete block.

If an intensive survey can be made:

Check floor joists and roof rafters for stamps that identifying numbers or letters. These stamps were located on the butt end and the face of the lumber.[162] Windows with small numbered plates can also indicate a precut house. Also look for shipping labels in areas like closets, doorjambs, or the on back of stair carriages. Fixtures and interior trim alone do not necessarily prove that a house is associated with a catalogue house. These items could have been ordered by any homeowner and were not just intended for use on precut houses.[163] Above all, measuring the resource can confirm whether it is associated with a precut manufacturer. This process, however, requires that the researcher identify the particular model and floor plan in a field guide or company catalogues. These measurements for precut houses are precise since the building materials were standardized, so if the house matches the dimensions in the original plan it is probably a kit house.[164]

Left: A shipping label for a Sears house in Anderson County was found on the inside of a door frame.
Right: Examples of stamped lumber. The top picture is from a Sears house which used numbers. The bottom picture is from a Gordon-Van Tine House, which has words stamped on the lumber identifying where it should be placed in the framing system. (Source: www.desertweyr.com).

Brief History of Panelized Prefabricated Houses

Panelized houses were manufactured in a similar process to precut houses. However, they took the production process one step further. Framing members were cut to specification, and the individual pieces were then assembled into larger units called panels at the factory. Panelized prefab houses actually were available at the beginning of the twentieth century. Early panelized houses were constructed with 2-foot by 2-foot or 2-foot by 3-foot lumber studs and preassembled into sections of walls, roofs, floors and partitions. The assembled sections, however, did not include interior or exterior sheathing. The exterior cladding and interior wall finish had to be applied at the building site. These panelized sections were connected with bolts making them easily assembled and disassembled. During these early years, panelized houses were used for portable houses and were not as popular as the precut houses.[165]

During the 1930s, panelized prefab manufacture advanced with new materials and production techniques. The increased availability of sheet materials, like plywood and steel, made panelized construction more sophisticated. By creating stressed-skin panels and steel modules, the panels themselves could become the structure of the building as well as the exterior shell. The prefabricated building units could be easily and efficiently assembled at the building site. Connected together by a joint system, panelized prefabs could be erected in just a few days. Typically, companies produced panel units with doors and windows already in-place.[166]

Above: Gunnison stessed skin panels fitted with window openings. By including windows and doors in panels, construction time at the site was reduced. (Source: The Prefabrication of Houses).

Company designers took advantage of modular coordination to produce units in standardized sizes. A variety of plans could be based on modular units providing a variety of models. Generally, panelized prefabs were single-story buildings with two to three bedroom plans. Conceived to be "starter" houses for first time homebuyers, panelized prefabs were generally designed in ranch and Cape Cod architectural styles.[167] Some companies offered standardized add-ons or options to customize an individual house. Ranging from porches, breezeways, garages, and ornate trim, these architectural "extras" enhanced the individuality of the prefab house.[168]

Panelized manufacturers were conscientiously trying to assimilate panelized prefabs with conventionally constructed houses. The industry was trying to overcome negative public per-

ceptions about prefabricated housing that had been created by World War II defense housing and by some of the non-traditional materials used to produce prefabs.[169] This accounts for the desire to cover the exterior panels with siding materials like shingles or clapboard. Companies often offered siding materials that could be purchased with the prefab.[170]

Marketing of the mid-century panelized prefabs generally was accomplished through company dealers. Foster Gunnison of Gunnison Homes is generally credited with innovating this retail sales technique for prefab houses. The dealer would function as a salesman, contractor, and financer. Companies did produce catalogues featuring house models, but the potential homebuyer would go through a dealer to make the purchase. Dealers typically had a "model" home available for prospective clients to tour and see the finished product in three dimensions, not just from a plan in a catalogue. This proved to be an effective sales technique which became an industry standard enduring even today.[171]

Panelized manufacturers generally distributed their products by truck. Specially designed vehicles organized the house parts into logical divisions so when the truck was unloaded the house could easily be assembled. Since the goal of prefab housing was to keep costs low, the delivery range of panelized houses from the factory was usually limited to 200-300 miles. As a function of this phenomenon, most panelized manufacturers had a regional distribution area.[172]

Above: Loading the Lustron materials onto a truck specially designed for the company. Materials were loaded to coordinate unloading with the assembly process on the site. (Source: The Prefabrication of Houses).

In terms of structural systems, and design the panels formed modular units with uniform dimensions and a varying degree of finish material, sometimes referred to as "stressed skin" panels. This allowed for a variety of floor plans to be developed using the same standard unit. Panels could consist of just the framing studs and plates that formed the basic structure of a wall. In other cases, companies assembled complete units with finished interior and exterior walls complete with windows and doors. The panels were shipped to the job site and assembled quickly for the homeowner.[173]

Right: Assembling a Cemsto House using solid panels in 4' by 4' modules. These panels served as both the interior and exterior wall surfaces. (Source: The Prefabricated of House).

Selected Panelized Manufacturers

Due to the regional nature of the panelized prefab industry, numerous manufacturers were spread across the country. Since this study is concerned with a specific region of Kentucky, only the manufacturers within the area are described below. Many of the included manufacturers had national recognition for their production and marketing techniques. Examples of panelized manufacturers include Gunnison Homes, National Homes, General Plywood Corporation, Hodgson Homes, Lustron, and Peaseway Homes.

Unlike precut houses and despite an effort to appear traditional, most panelized houses are recognizable on the landscape. They may have certain design elements or features that can be spotted from the street. So, while many of these houses use a traditional style vocabulary, the materials and detailing give their panelized prefab status away.

Gunnison Homes, New Albany, Indiana

Foster Gunnison helped to pioneer the panelized stressed-skin plywood production. The company was founded in 1935. Originally named "Gunnison Magic Homes," Gunnison produced panels in 4-foot by 8-foot units by bonding the 1/4-inch plywood to 1 1/2-inch thick framing members with a heated press. Total wall thickness was only 2-inches including insulation. Doors and windows were preinstalled into the panels. Metal registration plates bearing the company name and house serial number were installed in the utility room of most Gunnisons. By the start of World War II, Gunnison had sold 5,000 prefab houses. U.S. Steel purchased the company in 1944. After the war, Gunnison continued prefab production and by 1950 offered fourteen basic models. These models were one-story ranch houses with gable roofs. Gunnison Homes ceased production in 1974. Gunnison houses were distributed nationwide.[174]

Above: One of the Gunnison Deluxe models showing an optional breezeway connecting to a single car garage, which was also an extra feature. (Source: A Practical Guide to Prefabricated Houses).

Lustron Corporation, Columbus, Ohio

Carl Strandlund established Lustron homes in 1947 during the post-World War II era. Supported by a hefty government contracts, Strandlund sought to produce an all steel industrial house.[175] Using a combination of steel framing members and porcelain enameled coated steel panels, Lustrons represented a new kind of panelized house. The steel panels

Above: A Lustron "Newport" model. Besides being smaller than the "Westchester," this model has a front gable facade. (Source: The Prefabrication of Houses).

provided structural support and functioned as exterior sheathing. The porcelain enamel panels were available in four colors including "Dove Grey," "Maize Yellow," "Surf Blue," or "Desert Tan." Houses could be constructed within 130-manhours once the concrete slab foundation was poured.[176] Despite optimistic estimates of producing 30,000 units a year, the company only produced approximately 3000 Lustrons before ceasing operations in 1950.[177] Lustrons were shipped across the country and have been found extant in twenty-four states.[178] The "*Westchester*," the most common model, came in two- and three-bedroom units at a cost of $7000. Lustron also offered the "*Newport*" model that could also have two- or three-bedrooms, though "*Newport"* houses had a smaller footprint than the "*Westchester*." All houses were marked with a metal registration plate certifying the house was a Lustron and the houses can be easily identified from the exterior.[179]

National Homes, Lafayette, Indiana

Top picture: A National Homes "Thrift" model. Panelized prefab houses of the postwar era were often small two- or three-bedroom starter houses. (Source: The Prefabrication of Houses.)
Bottom picture: National Homes expanded the number and size of prefab houses in their catalogue. This tri-level house was very modern in the 1960s. (Source: Private collection).

Three former Gunnison Homes employees founded National Homes in 1940. By 1946, the company had sold 10,000 houses. National Homes employed the stressed-skin panelized method of construction for their prefab houses. Special 3/8-inch waterproof plywood was mounted onto 2-inch by 3-inch framing studs. Panels were produced as full room-sized units with doors and windows pre-installed. A special structural floor framing made of steel underpinned the primary structure. Metal registration plates listing the house serial number and company logo were placed in utility rooms. Designs were based on five basic floor plans with nine different "traditional" architectural styles.[180] The company continued to be successful into the 1960s. Company literature cites that by 1968, National Homes had sold 325,000 prefabs and claimed to be number one in U.S. prefab house sales. The prefabs offered by the company during this period included ranches, split-level, and two-story designs with Colonial or Contemporary styles.[181] The company was still producing prefab houses in 1971, with sales

figures of $178.5 million.[182] Information about when the company ceased operations has not been uncovered. National Homes were distributed through authorized dealers in Ohio, Indiana, Kentucky, Illinois, Michigan, and Wisconsin.[183]

General Plywood, Louisville, Kentucky

Very little information has been located about the General Plywood in primary and secondary sources. The company used a combination of precut members and panelized units to create prefab houses. Panels were made by gluing 5/16-inch plywood to 2-inch by 4-inch frames creating a stressed skin panel. Windows and doors were preinstalled into the panels. Precut joists and rafters were used to frame floors and ceilings. Exterior siding could be applied to the panelized surfaces. Houses could have as many as three bedrooms and the images located show designs in the Cape Cod style popular after World War II. No sales figures or distribution ranges for General Plywood have been identified.[184]

Above: A Cape Cod prefab house offered by the General Plywood Company. (Source: Prefabs on Parade).

Peaseway, Cincinnati, Ohio

Owned by the Pease Woodwork Co., Peaseway Homes started production in 1940. The manufacturing plant was located in Hamilton, Ohio. Using panelized stressed-skin plywood was applied to a standard 2-foot by 4-foot framework. Panels were then joined with invisible, interlocking joints. Exterior surfaces were sided with shingles or clapboard though one house style featured permastone cladding. Peaseway houses were offered in 24 different floor plans generally with Cape Cod architectural styling. Authorized dealers in Ohio, Michigan, Indiana, Illinois, West Virginia, and Kentucky sold Peaseway homes. Houses generally cost between $6000 and $7000.[185]

Right: A Peaseway prefab house featuring permastone cladding. This house looks just like conventionally constructed houses on the exterior. (Source: A Practical Guide to Prefabricated Houses).

Steelcraft Manufacturing Co., Cincinnati, Ohio

Steelcraft started manufacturing prefab barracks for the U.S. Government in 1941. Following the war, Steelcraft began producing single-family units by converting its construction methods from barracks to single family housing. This company used a combination of steel framing and aluminum panels to build the basic structure. Panels were joined with

Above: A Steelcraft prefab house. All framing materials were either steel or aluminum. Interestingly, stucco was added as the exterior sheathing material. (Source: Prefabs on Parade).

batten strips. The exterior was then stuccoed and an aluminum roof was applied to the building envelope. Units came in one and two-bedroom styles measuring 20 feet by 24 feet and 20 feet by 32 feet respectively. Houses were sold for prices between $994.00 and $1400.00 but did not include interior partitions, lighting, heating or plumbing fixtures. These features could be added at an additional cost making the two-bedroom model available for $3000.00. Like Gunnison and National, company dealers sold Steelcraft homes to prospective customers. Information about sales figures and distribution areas has not been compiled.[186]

Sectional Prefabricated Houses

The sectional house system involved a process that manufactures the building in units. Instead of assembling flat panels at the site, sectional houses were literally manufactured in three-dimensional modules. The complete house could be cut for example, into eight-foot "slices" or cut room by room. These sections were finished on the interior and exterior with walls, doors, trim, plumbing, and wiring. Shipped to the house site by truck, the individual sections then were attached together to form a complete house. This allowed for the house to be assembled quickly, sometimes even in one day. The advantage of sectional houses was that it allowed for quick occupation of the dwelling, since very little finish work was required at the site. This prefab type was especially suitable for acute housing shortages.[187]

Top: A unit of a TVA Sectional houses arriving at building site.
Bottom: The completed TVA prefab. (Source for both: The Prefabricated House).

Only three known examples of sectional houses in the United States have been identified. The Tennessee Valley Authority (TVA) actually created this type of prefab system during the 1930s. Designed to be temporary worker housing at TVA hydroelectric projects, these sectional houses could be assembled and disassembled with relative ease.[188] The TVA sectional houses especially suited work sites in remote locations where labor and building materials were scarce. The truckable TVA houses could arrive at the site and be assembled for habitation by the end of the day.[189] The federal government

adopted the TVA sectional houses for war housing in the 1940s. The Army actually erected several thousand sectional houses in the Oak Ridge, Tennessee Manhattan Project site. After the war, Prenco, and Reliance were two companies that developed sectional houses though no further information has been found about these houses.[190]

Preassembled Prefabricated Houses

The precursor to the modern manufactured home, a preassembled prefab house was completely constructed at the factory plant. All interior fixtures and trim as well as exterior cladding, windows and doors were assembled to create a complete house ready for occupancy. The preassembled unit would be delivered by truck to the house site and attached to a pre-poured foundation. Preassembled houses were limited to approximately eight feet in width due to truck shipping limitations. Not many prefabricated houses were constructed in this method, most likely because the mobile home became more prevalent.[191]

Wingfoot Homes are the only identified example of a preassembled prefab type. Manufactured as a complete unit including plumbing and wiring, the Wingfoot Home was delivered to the site by truck. Wingfoot Homes did not have wheel axels and were not considered mobile. The LeTourneau poured concrete prefabricated house could also be considered a more unusual representation of a preassembled house. LeTourneau houses were manufactured at the site with a large machine called the "Tournalayer" that cast the house in concrete. Though manufacture of these houses occurred at the building site, the machine itself was prefabricated to make the final product.[192]

Above: A completely preassembled Wingfoot house ready for occupancy. (Source: Prefabs on Parade).

Above: A Le Tourneau prefab house that was produced at the site in a single pour of concrete cast in the "Tournalayer" machine. (Source: Prefabs on Parade).

Identification of Panelized/Sectional/Preassembled Property Types

For panelized, sectional, or preassembled property types, identification can be somewhat easier than precut houses. Certain manufacturers' houses incorporate unique characteristics that make visual identification easy from the exterior. If the researcher can become familiar with the architectural details and options offered by an individual manufacturer, these prefab types can be identified in the field without much difficulty. Trade journals, such as *Architectural Forum* or *Fortune Magazine,* where manufacturers advertised their products with illustrations depicting different designs, can help the researcher identify these particular prefab types. Secondary sources, *Prefabs on Parade* and *A Practical Guide Prefabricated Houses,* can also provide visual reference for numerous prefab manufacturers across the country.

City directories might prove useful to researchers for identifying prefab dealers. If dealers can be found in a community, most likely some prefab construction took place. Deeds and mortgages could potentially list a prefab company name, though most did not offer mortgages directly from the company. Building permits might also list the manufacturer's name as the architect.

Plats and Sanborn Maps can assist in the identification of neighborhoods that developed during the period of panelized or sectional houses, and to a lesser extent preassembled house popularity. As a general rule, neighborhoods developed in the period of 1940 to 1980s, with particular focus on the era before 1970, would be the areas to look for panelized, sectional, or preassembled houses. If the prefab house is constructed with steel such as Lustron houses, a color Sanborn Map will identify steel buildings in gray.

Above: A National house with exposed panels on the side elevation leaving a smooth surface.

Visual inspection of a resource might reveal building elements associated with a particular manufacturer. First, some panelized prefabs remain unclad with their original panels exposed. Look for smooth, planar surfaces with seams that are left uncovered or concealed by vertical battens. In some examples, the house might be partially clad with shingles or siding on the lower half leaving the panels exposed on the upper half. Panelized

Above: Exterior details like porch railings and door hoods with wrought iron detailing are hallmarks of a Gunnison house. An other tell tale detail of a Gunnison house is the sheet metal chimney with horizontal vents.

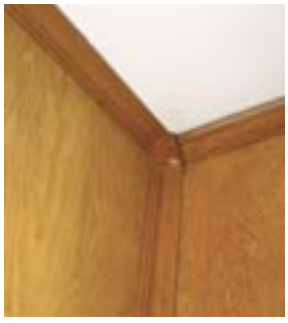
manufacturers used distinctive options or details to customize prefab houses. If the researcher is familiar with these elements, even an altered prefab might be identified from the exterior. Elements to look for include sheet metal chimneys located on ridgelines, decorative grilles and vents, exterior trim, battens, and even the panels themselves.

If an intensive survey can be made:

In cases where no archival source has been located for a particular prefab model, interior investigation might reveal a registration plate for the manufacturer. Check for a company registration plate usually made of metal on the interior of the house. These metal plates are generally found in utility rooms or near the kitchen. Though the exterior of a property might have been sided, the interior panels might still be uncovered. Look for seams at regular intervals even if the walls have been wallpapered or painted. Some companies used battens to cover seams, but others did not. Some manufacturers have distinctive architectural elements and trim. If the researcher is familiar with a particular company's unique decorative elements, the prefab might be positively identified.

When these types cannot be identified from the exterior, measuring the resource can confirm whether it is associated with a panelized, sectional, or preassembled manufacturer. This process, however, requires that the researcher identify the model and floor plan in a manufacturer's catalogue. At this time, no single field guide exists that catalogues panelized/sectional/preassembled property types by manufacturer. If the researcher has been able to locate a particular manufacturer's catalogue of houses, dimensions and floor plans can be compared. These measurements are precise, so if the house matches the footprint dimensions in the original plan it is

The photo on the right shows a National Homes registration plate. On the left, a corner batten on the interior of a Gunnison house. These types of details let the prefab house detective know that this is probably a Gunnison or National house



probably a prefab house. Like precut houses, these prefab types could also be customized. But again, the overall building footprint was not altered in this process.

Conclusion

Understanding the origins of prefabricated houses gives insight into their importance in domestic architectural history. Developed as an industrial form of housing, prefabs made their place on the twentieth century American landscape. Prefab houses, as we have seen, are important for their association with the overarching goal of providing attractive, affordable homes for all Americans. The single-family house was viewed by many as the key to all ills facing society and was thought to foster healthy, happy families. To this end, housing reformers and prefab manufacturers collaborated, culturally, if not literally, to develop better ways of providing housing to more and more Americans. In other words, cost-saving measures and industrialization of the housing process both have a district cultural component. Prefab housing manufacturers were not just trying to make money; they were also responding to the deep-seated desire for a decent and affordable home for all social and economic classes. No longer were multi-generational families encouraged to stay under one roof. Home ownership came within reach of the majority of Americans, regardless of income, and this was directly related to improvements in the production of housing. Offering ways to efficiently distribute and erect housing, prefab manufacturers adopted new technologies and materials. In doing so, they led to a revolution in the way Americans lived. Prefab housing then is a significant reminder of the democratic desire to provide decent, safe, and affordable housing for all.

The following section will address registration requirements for prefabricated housing and case study survey findings. Placing prefabricated housing into an appropriate historic context, as this section has attempted to do, will help to assess the significance and integrity of these prefab resources. Case study examples located during field survey will also serve to illustrate how prefabricated housing can be evaluated.

Endnotes

[1] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 5.
[2] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 57.
[3] Burnham Kelly, *The Prefabrication of Houses,* p. 3.
[4] Alfred Bruce and Harold Sandbank, *A History of Prefabrication,* p. 50.
[5] Kenneth T. Jackson, *Crabgrass Frontier,* p. 127-128.
[6] Christine Hunter *Ranches, Rowhouses and Railroad Flats*, p. 146.
[7] Kenneth T. Jackson, *Crabgrass Frontier,* p. 127-128.
[8] David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places,* 54-56.
[9] David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places,* 63.
[10] Dolores Hayden, *Building Suburbia: Green Fields and Urban Growth, 1820-2000*, p. 133.
[11] Clifford Edward Clark, Jr., *The American Family Home: 1800-1960*, p. 201.
[12] Allan D.Wallis, "House Trailers: Innovation and Accommodation in Vernacular Housing," p. 29.
[13] Allan D.Wallis, "House Trailers: Innovation and Accommodation in Vernacular Housing," p. 34- 35.
[14] Scott Erbes, "Manufacturing and Marketing the American Bungalow: The Aladdin Company, 1906 – 1920," p. 53-54.
[15] Dolores Hayden, *Building Suburbia: Green Fields and Urban Growth, 1820-2000*, p. 118.
[16] Rosemary Thorton, *The Houses that Sears Built*, p. 74.
[17] Dolores Hayden, *Building Suburbia: Green Fields and Urban Growth, 1820-2000*, p. 118.
[18] Donald Albrecht, *World War II and the American Dream: How Wartime Building Changed a Nation*, p. 20.
[19] Curt Dietz, "A Survey and Analysis of House Prefabrication." p. 31.
[20] Thomas T. Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment,* p. 6.
[21] Gilbert Herbert, *The Dream of the Factory-Made House*, p. 10-12.
[22] Burnham Kelly, *The Prefabrication of Houses,* p. 9.
[23] Dolores Hayden, *Building Suburbia: Green Fields and Urban Growth, 1820-2000*, p. 97.
[24] Dolores Hayden, *Building Suburbia: Green Fields and Urban Growth, 1820-2000*, p. 116.
[25] Rosemary Thorton, *The Houses that Sears Built*, p. 40.
[26] Rosemary Thorton, *The Houses that Sears Built*, p. 12.
[27] Rosemary Thorton, *The Houses that Sears Built*, p. 5.
[28] Dolores Hayden, *Building Suburbia: Green Fields and Urban Growth, 1820-2000*, p. 110.
[29] Clifford Edward Clark, Jr., *The American Family Home: 1800-1960*, p. 193.
[30] Clifford Edward Clark, Jr., *The American Family Home: 1800-1960*, p. 193.
[31] David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places,* p. 63.
[32] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 49.
[33] Burnham Kelly, *The Prefabrication of Houses,* p. 9.
[34] Clifford Edward Clark, Jr., *The American Family Home: 1800-1960*, p. 193.
[35] Joseph B. Mason, *History of Housing in the U.S.: 1930,* p. 56 The other prefab manufacturers were Green Lumber Company, Michigan; Southern Mill and Lumber, Kansas; and Houston Ready Cut, Texas.
[36] Burnham Kelly, *The Prefabrication of Houses*, p. 61.
[37] Gwendolyn Wright, *Building the Dream: A Social History of Housing in America.* p. 242.
[38] Burnham Kelly, *The Prefabrication of Houses*, p. 61-62.
[39] Burnham Kelly, *The Prefabrication of Houses*, p. 71.
[40] Gwendolyn Wright, *Building the Dream: A Social History of Housing in America.* p. 156.
[41] Scott Erbes, "Manufacturing and Marketing the American Bungalow: The Aladdin Company, 1906-20," p. 47.

[42] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 11.
[43] Dolores Hayden, *Building Suburbia: Green Fields and Urban Growth, 1820-2000*, p. 110. Hayden points out that despite the mail-order companies' declaration that the houses could be constructed as a do-it-yourself project, oftentimes local carpenters were hired to assist in building kit houses.
[44] Burnham Kelly, *The Prefabrication of Houses,* p. 29.
[45] David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places,* p. 63.
[46] Gilbert Herbert, *The Dream of the Factory-Made House*, p. 230.
[47]David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places,* p. 65.
[48] O.W. McKennee, et. al., *Prefabs on Parade*, p. 18.
[49] Gwendolyn Wright, *Building the Dream: A Social History of Housing in America*, p. 240-243.
[50] O.W. McKennee, et. al., *Prefabs on Parade*, p. 18.
[51] Clifford Edward Clark, Jr., *The American Family Home: 1800-1960*, p. 196-197.
[52] Clifford Edward Clark, Jr., *The American Family Home: 1800-1960*, p. 131.
[53] Clifford Edward Clark, Jr., *The American Family Home: 1800-1960*, p. 162, 182.
[54] David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places,* p. 56.
[55] Gwendolyn Wright, *Building the Dream: A Social History of Housing in America.* p. 160-161.
[56] David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places,* p. 65.
[57] Clifford Edward Clark, Jr., *The American Family Home: 1800-1960*, p. 198-199.
[58] Thomas T. Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment,* p. 27.
[59] Thomas T. Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment,* p. 27.
[60] Curt Dietz, "A Survey and Analysis of House Prefabrication." p. 1.
[61] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 11.
[62] Clifford Edward Clark, Jr., *The American Family Home: 1800-1960*, p. 181-182.
[63] Raymond K. Graff, *The Prefabricated House,* p. 10.
[64] Burnham Kelly, *The Prefabrication of Houses*, p. 81.
[65] Curt Dietz, "A Survey and Analysis of House Prefabrication," p. 28.
[66] O.W. McKennee, et. al., *Prefabs on Parade*, p. 16-17.
[67] Burnham Kelly, *The Prefabrication of Houses*, p. 111.
[68] Curt Dietz, "A Survey and Analysis of House Prefabrication." p. 30.
[69] Rosemary Thorton, *The Houses that Sears Built*, p. 34-35.
[70] Dolores Hayden, *Building Suburbia: Green Fields and Urban Growth, 1820-2000*, p. 97-98.
[71] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 13.
[72] Curt Dietz, "A Survey and Analysis of House Prefabrication." p. 31.
[73] Burnham Kelly, *The Prefabrication of Houses*, p. 219-221.
[74] Burnham Kelly, *The Prefabrication of Houses*, p. 187.
[75] O.W. McKennee, et. al., *Prefabs on Parade*, p. 15.
[76] Curt Dietz, "A Survey and Analysis of House Prefabrication." p. 32.
[77] Burnham Kelly, *The Prefabrication of Houses*, p. 188.
[78] Burnham Kelly, *The Prefabrication of Houses*, p. 189.
[79] Curt Dietz, "A Survey and Analysis of House Prefabrication." p. 20.
[80] Burnham Kelly, *The Prefabrication of Houses*, p. 181.
[81] O.W. McKennee, et. al., *Prefabs on Parade*, p. 15.
[82] Burnham Kelly, *The Prefabrication of Houses*, p. 181-182.
[83] Thomas T. Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment,* p. 8.

[84] Thomas T. Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment,* p. 7.
[85] Pamela Simpson, *Quick, Cheap and Easy,* p. 24.
[86] Burnham Kelly, *The Prefabrication of Houses*, p. 183.
[87] Burnham Kelly, *The Prefabrication of Houses*, p. 181.
[88] Colin Davies, *The Prefabricated Home*, p. 53-54.
[89] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 13.
[90] Katherine Cole Stevenson and H. Ward Jandl, *Houses by Mail: A Guide to Houses from Sears, Roebuck and Company,* p. 32.
[91] Colin Davies, *The Prefabricated Home*, p. 53-54.
[92] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 70.
[93] Thomas T. Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment,* p. 18.
[94] Gilbert Herbert, *The Dream of the Factory-Made House*, p. 223.
[95] Colin Davies, *The Prefabricated Home*, p. 25-29.
[96] Gordon J. Chapman, *Marketing of Prefabricated Houses*, p. 40-41.
[97] Curt Dietz, "A Survey and Analysis of House Prefabrication," p. 7.
[98] Raymond K. Graff, *The Prefabricated House,* p. 9.
[99] Clifford Edward Clark, Jr., *The American Family Home: 1800-1960*, p. 201.
[100] Raymond K. Graff, *The Prefabricated House,* p. 24.
[101] Curt Dietz, "A Survey and Analysis of House Prefabrication," p. 38.
[102] Rosemary Thorton, *The Houses that Sears Built*, p. 83-84.
[103] Burnham Kelly, *The Prefabrication of Houses*, p. 195.
[104] Randy Shipp, "Gunnison Homes: A Brief History," p. 2.
[105] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 13.
[106] Raymond K. Graff, *The Prefabricated House,* p. 24.
[107] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 62.
[108] Gordon J. Chapman, *Marketing of Prefabricated Houses*, p. 25.
[109] Gilbert Herbert, *The Dream of the Factory-Made House*, p. 230.
[110] Burnham Kelly, *The Prefabrication of Houses*, p. 49.
[111] Thomas T. Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment,* p. 8-9.
[112] Direct sales through the catalogues were still the primary method for kit house sales.
[113] Burnham Kelly, *The Prefabrication of Houses*, p. 51.
[114] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 16.
[115] Gordon J. Chapman, *Marketing of Prefabricated Houses*, p. 23.
[116] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 16.
[117] Burnham Kelly, *The Prefabrication of Houses*, p. 379.
[118] Katherine Cole Stevenson and H. Ward Jandl, *Houses by Mail: A Guide to Houses from Sears, Roebuck and Company,* p. 30.
[119] Rosemary Thorton, *The Houses that Sears Built*, p. 3.
[120] Raymond K. Graff, *The Prefabricated House,* p. 37.
[121] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 48.
[122] Scott Erbes, "Manufacturing and Marketing the American Bungalow: The Aladdin Company, 1906-20," p. 47.
[123] Rosemary Thorton, *The Houses that Sears Built,* p. 11.
[124] Curt Dietz, "A Survey and Analysis of House Prefabrication." p. 5.
[125] Curt Dietz, "A Survey and Analysis of House Prefabrication." p. 2-3.
[126] Burnham Kelly, *The Prefabrication of Houses*, p. 11-12.

[127] Rosemary Thorton, *The Houses that Sears Built,* p. 24.
[128] Dolores Hayden, *Building Suburbia: Green Fields and Urban Growth, 1820-2000*, p. 102.
[129] Katherine Cole Stevenson and H. Ward Jandl, *Houses by Mail: A Guide to Houses from Sears, Roebuck and Company,* p. 21.
[130] Katherine Cole Stevenson and H. Ward Jandl, *Houses by Mail: A Guide to Houses from Sears, Roebuck and Company,* p. 30.
[131] Katherine Cole Stevenson and H. Ward Jandl, *Houses by Mail: A Guide to Houses from Sears, Roebuck and Company,* p. 19.
[132] http://clarke.cmich.edu/aladdin/Aladdin.htm.
[133] Rosemary Thorton, *The Houses that Sears Built,* p. 92-94.
[134] Burnham Kelly, *The Prefabrication of Houses*, p. 12.
[135] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 64.
[136] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 75-76.
[137] Dale Wolicki, "Historical Notes on Kit and Precut Homes" http://www.elginarea.org/kithouse/.
[138] Scott Erbes, "Manufacturing and Marketing the American Bungalow: The Aladdin Company, 1906-20," p. 47.
[139] Dale Wolicki, "Historical Notes on Kit and Precut Homes" http://www.elginarea.org/kithouse/.
[140] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 71-72.
[141] Dale Wolicki, "Historical Notes on Kit and Precut Homes" http://www.elginarea.org/kithouse/.
[142] Dale Wolicki, "Historical Notes on Kit and Precut Homes" http://www.elginarea.org/kithouse/.
[143] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 72.
[144] Dale Wolicki, "Historical Notes on Kit and Precut Homes" http://www.elginarea.org/kithouse/.
[145] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 64.
[146] Dale Wolicki, "Historical Notes on Kit and Precut Homes" http://www.elginarea.org/kithouse/.
[147] Gordon-Van Tine Company, *117 House Designs of the Twenties*, p. 1, 6-7.
[148] Dale Wolicki, "Historical Notes on Kit and Precut Homes" http://www.elginarea.org/kithouse/.
[149] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 69.
[150] Dale Wolicki, "Historical Notes on Kit and Precut Homes" http://www.elginarea.org/kithouse/.
[151] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 69.
[152] Rosemary Thorton, *The Houses that Sears Built,* p. 3.
[153] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 20.
[154] Dale Wolicki, "Historical Notes on Kit and Precut Homes" http://www.elginarea.org/kithouse/.
[155] Rosemary Thorton, *The Houses that Sears Built,* p. 80-81.
[156] Rosemary Thorton, *Finding the Houses that Sears Built,* p. 11.
[157] Rosemary Thorton, *The Houses that Sears Built,* p. 91.
[158] Interview with Jerry Cecil, Sears Kit House Historian. It is still possible to find precut houses constructed after 1940, but the peak period of kit house construction was in the 1920s.
[159] Rosemary Thorton, *Finding the Houses that Sears Built,* p. 11.
[160] Rosemary Thorton, *Finding the Houses that Sears Built,* p. 12.
[161] Interview with Jerry Cecil, Sears Kit House Historian.

[162] Rosemary Thorton, *Finding the Houses that Sears Built,* p. 8.
[163] Companies like Sears and Wards offered catalogues with these items that could be purchased independently from a kit house.
[164] Rosemary Thorton, *Finding the Houses that Sears Built,* p. 11.
[165] Robert Schweitzer and Michael W.R. Davis, *America's Favorite Homes: Mail-Order Catalogues as a Guide to Popular 20th-Century Houses,* p. 63.
[166] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 6.
[167] Raymond K. Graff, *The Prefabricated House,* p. 24.
[168] Raymond K. Graff, *The Prefabricated House,* p. 54-55.
[169] Burnham Kelly, *The Prefabrication of Houses*, p. 63.
[170] Raymond K. Graff, *The Prefabricated House,* p. 59-60.
[171] Burnham Kelly, *The Prefabrication of Houses*, p. 43.
[172] Raymond K. Graff, *The Prefabricated House,* p. 25.
[173] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 6.
[174] Randy Shipp, " Gunnison Houses: A Brief History, p. 2.
[175] Thomas T. Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment,* p. 38.
[176] O.W. McKennee, et. al, *Prefabs on Parade*, p. 62.
[177] Thomas T. Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment*
[178] Lustron Locater website, http://home.earthlink.net/~ronusny/reg&phot.html/registry.html.
[179] Thomas T. Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment,* p. 67-69, 73.
[180] Raymond K. Graff, *The Prefabricated House,* p. 82.
[181] National Homes Corporation, *National Homes Collection of Distinguished Homes*, p. 1.
[182] Baker Library Lehman Brother's Collection, "National Homes Corporation," http://quincy.hbs.edu:8080/lehman/company_histories/n-o/companyHistory.html?companyName=National%20Homes%20Corporation.
[183] Raymond K. Graff, *The Prefabricated House,* p. 82.
[184] O.W. McKennee, *Prefabs on Parade,* p. 47.
[185] Raymond K. Graff, *The Prefabricated House,* p. 86.
[186] O.W. McKennee, *Prefabs on Parade,* p. 80 and "Homes of Steel and Aluminum for Veterans" p. 25-26.
[187] Raymond K. Graff, *The Prefabricated House,* p. 34.
[188] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 9.
[189] Alfred Bruce and Harold Sandbank, *A History of Prefabrication,* p. 59.
[190] Burnham Kelly, *The Prefabrication of Houses*, p. 37-38.
[191] Raymond K. Graff, *The Prefabricated House,* p. 35.
[192] A.L. Carr, *A Practical Guide to Prefabricated Houses,* p. 6-7.

Section III. Evaluation and Case Study County Surveys

Evaluation

Prefabricated property types have had an impact on the built environment and remain important links to American social and cultural history of twentieth century domestic architecture. Prefab housing provided one solution for the nation's housing needs. Prefab manufacturers attempted to create an affordable and easy-to-construct house form through industrialized methods. Prefab housing represented new building and design innovations that were developed in the early and mid-twentieth century. Prefabricated housing also reflected the inherent values of modern living in the early and mid-twentieth century. Prefabricated housing occupies a significant role in twentieth century domestic architectural history.

Establishing the value of prefab houses within this historic context is critical to establish their historic significance. The choice of prefab housing was generally tied to larger cultural phenomenon like the development of a certain industry, a sudden influx in population, or a popular architectural style. In considering the significance of prefabricated housing, the evaluation of a prefabricated resource must be considered in either a local, state, or national context.

The National Register of Historic Places (NRHP) provides a framework to evaluate the significance of historic and cultural resources. By establishing an historic context for a resource, the researcher can establish a concrete argument for significance. This process aids preservation planning and helps to make cultural resource management decisions. There are four established criteria by which an historic resource can be evaluated.

A. Association with events that have made a significant contribution to the broad patterns of our history; or

B. Association with the lives of persons significant in our past; or

C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent a work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Yielded, or may likely to yield, information important to prehistory or history.[1]

In order to be eligible for listing in the National Register of Historic Places, a resource only needs to satisfy one of these criteria. In most cases, prefabricated housing would be evaluated for eligibility under Criterion A for its association with broad patterns related to community development, social history, or industrial growth. In cases where prefab houses were constructed for worker housing, a context for the association with a particular company or industry in a community could be developed. Under Criterion C, the property's association with a particular design or construction method from a prefab manufacturer would be developed within an historic context.

Once a criterion for evaluation has been established, an historic context for a resource or district will be placed within an area of significance and compared with similar resources. David L. Ames and Linda Flint McClelland explain the application of areas of significance this way: "Area of significance is that aspect of history in which a historic property through design, use, physical characteristics, or association influenced the history, and identity of a local area, region, State, or the Nation." For prefabricated houses, likely areas of significance will relate to community planning and development, industry, social history, transportation, engineering, or architecture.[2]

The researcher should consider all possible contexts to determine significance for a property. In dealing with mass-produced resources, careful consideration must be given to both the significance and integrity of a particular resource or group of resources. Some prefab resources will not possess clear significance or retain enough integrity to be considered eligible for the National Register of Historic Places. Prefab resources that have value within a larger context related to an event, such as the development of affordable housing within an area or as important example of prefabricated construction and design technology, and that have sufficient integrity will have higher likelihood of being considered eligible. Additionally, some prefabs may not be eligible individually and may only be considered as eligible as part of a district.

Integrity Considerations

Once the historic context has been identified for a prefabricated resource, an assessment of integrity must be undertaken. The integrity of a resource expresses the historic significance of a property through these seven elements. It is through this lens that a historic resource can convey its meaning in our cultural history. Buildings do

change over time with additions and alterations. Some additions and alterations are more sympathetic than others. Identifying the character-defining elements both tangible and intangible are important in assessing the inherent integrity of a resource. Once a threshold of integrity can be determined for a particular property type, a resource can be evaluated within this framework.

It is important to remember that assessing integrity of these resources is a balancing act. While some prefabs might lose integrity through window replacement, especially if the evaluation was done under Criterion C only, and the area of significance had a strong relationship with integrity of materials, it would be unlikely that one element of integrity would blunt a resource's eligibility. Instead, both Criterion A and C should be looked at when assessing a prefab and all elements of integrity must be weighed with relation to their importance to the area of significance.

In a Criterion A nomination, a prefabricated house should have a medium-to-high value placed on integrity of **design**, **workmanship**, **materials**, **location**, **feeling**, and **association**. Lower levels of integrity are acceptable for **setting**. To be eligible for the National Register of Historic Places under Criterion C, a prefab property type should have a high level of **design, workmanship**, and **materials.** Medium-to-high weight should be placed on integrity of **location**, **feeling**, and **association**. **Setting** can be altered without harming a prefab's ability to represent its significance.

In terms of **design**, the prefabricated house was constructed from specific plans designed by company architects. The integrity of design is directly related to the industrial process within the prefab house manufacture. Though there could be some customization of floor plan initially, the general footprint (form), floor plan, and style of the house should not have been changed. In the case of *panelized* prefabs that were generally conceived of as starter homes, the original form was relatively compact. Inappropriate additions that are unsympathetic in scale or materials could impact eligibility, especially if the overall building footprint is subsumed among additions.

Materials are also important to the integrity of a prefab house. Standardized lumber, windows, doors, and trim are essential to the construction of a *precut* house. The modular panels, windows, doors and trim are essential to the construction of a *panelized*, *sectional*, or *preassembled* houses. Replacement windows could impact integrity of materials. For example, Gunnison houses originally had steel casement windows, which reflect an industrial charac-

ter. Two-over-two wooden windows would therefore be inappropriate for Gunnison housing. Since it was not uncommon for *panelized*, *sectional*, or *preassembled* houses to be sheathed with shingles or siding, replacement cladding will not impact integrity, as long as it does not diverge greatly from the look of the original cladding and follows the general form of the original cladding materials. Siding that covers original architectural detailing would impact integrity. Removal, replacement, or alterations to original fabric could impact the ability of the property to convey historic significance.

Workmanship is especially important to a prefab building's effort to convey significance. Workmanship is traditionally thought of as the work of a master craftsperson. However, the National Register defines workmanship this way:

> The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory…It can be based on common traditions or innovative period techniques.
>
> Workmanship is important because it can furnish evidence of the technology of a craft, illustrate the aesthetic principles of a historic or prehistoric period, and reveal individual, local, regional, or national applications of both technological practices and aesthetic principles.[3]

It is obvious that workmanship is a very important element of integrity for factory-produced houses. In the case of prefabs, the craft of the time that truly reflects innovative techniques and the culture of the twentieth century would have to be produced in a factory. Prefab houses should display standardization of the construction technique for them to be eligible. For example, a Aladdin home should have its characteristic factory produced trim and standardized lumber to convey that it is a prefab factory produced house and a Lustron should have its factory produced porcelain enamel exterior tiles to meet integrity standards.

Integrity of **location** is key to relating the property to its historic context. The original location of the property places it in the appropriate context, whether built in an early or mid-twentieth century suburb or as a part of a company town. Prefabricated houses should not have been moved. In cases where a prefab house was relocated, it must either demonstrate exceptional architectural value and retain integrity of design, workmanship, materials, feeling, and association; or it must be demonstrated to be the only surviving property most

importantly associated with a particular historic event or an important aspect of a historic person's life. For more information about nominating or evaluating moved properties, see the Criterion Consideration B for Moved Properties online at http://www.cr.nps.gov/nr/publications/bulletins/nrb15/nrb15_7.htm#crit%20con%20b

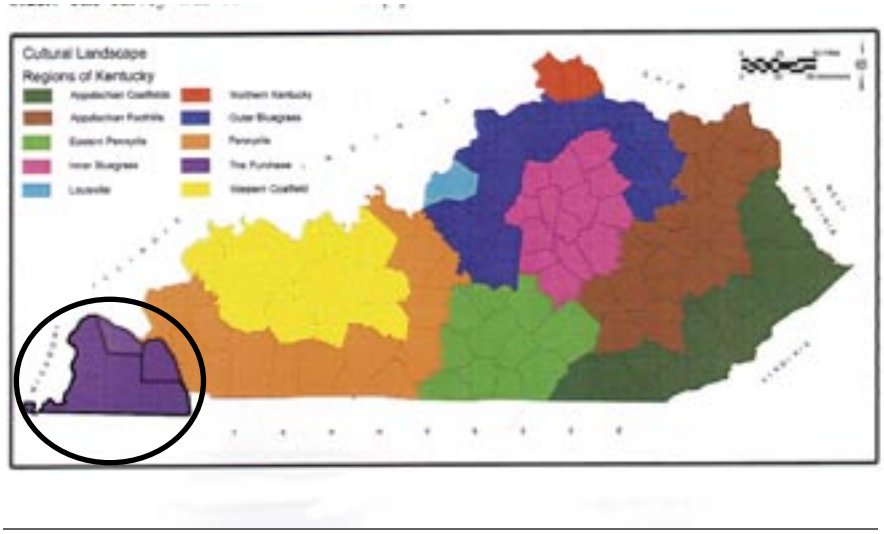
The **Setting** for a prefab house is also germane to integrity considerations. Given that prefabricated houses were used as dwellings, a sufficient amount of residential context should still remain with the property. Prefab houses could be found in urban, suburban, or rural settings. The key to evaluating integrity of setting is that the property should convey a sense of residential use. This level of integrity, while important, would not necessarily need to be intact for a prefab to be considered significant.

Prefabricated houses possess intangible qualities of **feeling** and **association.** These elements of integrity convey information about the time, place, and culture in which the prefab house was developed. The inherent qualities of a prefabricated house include style, form, workmanship, and detailing. Though difficult to quantify, integrity of feeling and association should relate the historic context that is developed for the property. If sufficient levels of design, workmanship, materials, and location are present, then feeling and association will have to remain with the property in question.

Now that the preliminary criteria and integrity considerations have been identified for prefabricated housing, the application of these registration requirements can be examined. In particular, panelized prefab house types located in Paducah will be examined, in order to demonstrate a sample integrity evaluation and eligibility processes for prefab housing. This section appears directly before the summary of field work in the Paducah area. Regrettably, other prefab house types were not found and confirmed in sufficient numbers in the field to permit model National Register evaluations. Much more intensive field work should be done to develop model evaluations on precut, sectional, and preassembled prefab property types. At this time, only generalized conclusions can be made from primary and secondary archival sources and from evaluation of a very small number examined in the field. The following sections will also explore potential historic contexts that could form the basis for significance for prefab historic resources.

Jackson Purchase Cultural Landscape Region

The Jackson Purchase is located in the western most part of the state of Kentucky. This region is bounded by the Mississippi, Ohio, and Tennessee Rivers as well as the Land Between the Lakes area. It was technically part of Kentucky at its statehood in 1792, but did not come under definitive U.S. control until it was purchased from the Chicksaw Indians by Andrew Jackson in 1818. Kentuckians generally refer to this region as "the Purchase."[4] Although Jackson's purchase also included all of Tennessee west of the Tennessee River, the term *Jackson Purchase* is used only to refer to the Kentucky portion of the acquisition; the Tennessee region directly to the south is typically called West Tennessee.[5]



Map of Kentucky's Cultural Landscape Regions. The Jackson Purchase regiond is outlined by the black circle. (Source: "A Cultural Historic Survey of the Proposed Telecommunication Tower Site West of Future City, McCracken County, Kentucky).

The Jackson Purchase Cultural Landscape Region was formally recognized by the Kentucky Heritage Council as a planning unit to study historic themes and develop preservation contexts. The Jackson Purchase Cultural Landscape consists of eight counties including: Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Marshall, and McCracken.[6] The largest city and main economic center, Paducah, has approximately 30,000 residents. Only two other towns in the region, Murray and Mayfield, have more than 5,000 residents.[7]

Geologically, the Purchase area is part of the Mississippi Delta. This region of Kentucky contains some of the richest agricultural lands, with the production of dark-leaf tobacco dominanting the area in the early and mid-twentieth century. The population in the region

was generally rural except for the county-seat towns. Paducah took on the role as regional capital, since it had developed as a distribution center for the region's products. Postwar industrialization in the late 1940s and 1950s created a new economic base, especially in McCracken and Marshall counties. The new industries associated with the Atomic Energy Commission's (AEC) Gasseous Diffusion Plant near Paducah were powered by the Tennessee Valley Authority's Kentucky Dam.[8] Allied industries involved in chemical production located along the Ohio River near Calvert City. This new industrialization of the region drew more people to the area in search of employment after World War II.[9] Tourism and recreation is also an important industry in the Purchase that developed during the mid-twentieth century. Boating and camping became popular tourist activities, centering largely on the Tennessee Valley Authority-created Kentucky Lake, which now forms most of the Purchase's eastern border, and Lake Barkley a few miles to the east,.[10]

The counties of the Jackson Purchase including Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, McCracken, and Marshall contain prefabricated housing property types, given their proximity to regional prefab manufacturers' factories. Sears's factory in Cairo, Illinois, was located across the Mississippi River near Wickliffe. The counties of the Jackson Purchase were also well within the distribution range of prefab companies like Gunnison Homes in New Albany, Indiana and National Homes in Lafayette, Indiana. For the purposes of this study, resources located in McCracken and Marshall counties served as case study examples for the documentation of prefabricated houses in the Jackson Purchase Cultural Landscape region. Those resources encountered provided the study's examples of prefab houses in urban, suburban, and rural contexts. Project staff conducted fieldwork in these counties to survey associated properties in February and March 2006.

McCracken County

1959 General Highway Map of McCracken County. (Source: Kentucky Transportation Cabinet).

McCracken County was formed in 1825 and joined the Commonwealth of Kentucky as seventy-eighth county. The county is named for Captain Virgil McCracken, who was killed at the Battle of Raisin during the War of 1812. The county is located at the confluence of the Tennessee and Ohio rivers in the Jackson Purchase region and contains 251 square miles. Paducah is the primary city of the region and the county seat.[11]

Paducah, named and laid out by explorer William Clark, was established in 1827 on a tract of land owned by the Clark family. In 1831, it replaced the town of Wilmington as the county seat.[12] Although it developed later than other communities in the region, Paducah grew rapidly because of its access to the Ohio and Tennessee rivers. Town trustees realized the city's strategic trading location and used public money to improve the wharf. Paducah developed into a thriving river port as the shipping point of tobacco from the region.[13] Manufacturing industries also developed as Paducah's role as a river town increased. Paducah's exports included dressed lumber, barrel staves, railroad ties, flour, meal, and tobacco twists and plugs. In 1860, Paducah had reached the status of Kentucky's fifth largest manufacturing center. By the turn of the century, the town had risen to the second largest manufacturing and distribution center in the state.[14]

Paducah's rise in trade dominance benefited from the development of the railroads. In 1850, the Federal Government granted land to the Illinois Central Railroad for the completion of a line to Cairo, Illinois. At the same time, the Mobile and Ohio Railroad that connected the Gulf of Mexico by rail to the Great Lakes was also granted land. The northern terminus was located in west Kentucky, near Paducah. City officials developed a way to connect the two systems with a 60-mile railroad.[15]

Paducah flourished as a center of river and railroad trade; the town grew rapidly, attracting investors and workers alike. In 1850, the city had 2,428 residents within its boundar-

ies. The first expansion from the original town plat occurred in 1856, when city trustees approved three additions, increasing the city's boundaries to 96 blocks.[16] The city had a substantial African American population, which reached a total of 547 by 1860. By 1880, Paducah's African American population accounted for 32.3% of the city's total residents.[17] At the turn of the century, the city's total population had increased by ten times, to 20,000 residents. Paducah achieved the status of a second-class city by 1901.[18]

Paducah's manufacturing base continued to be healthy at the turn of the century, with 150 locally owned factories, mills, and wholesalers. The establishment of the Illinois Central Railroad shops in 1927 represented Paducah's first major industrial expansion in the twentieth century. The plant was built to accommodate locomotive manufacture, repair, and maintenance. The 38-acre plant was one of the largest such facilities in the nation.[19] The company employed 5,000 workers and contributed significantly to the local economy.[20]

Paducah's city limits were still pretty compact by 1940. The city's boundaries would expand during the 1950s. (Source: United States Department of the Interior USGS Map, "Paducah Quadrangle," 1940).

McCracken County's prosperity also benefited higher learning in the area. In 1909, D.H. and Artelia Anderson opened the West Kentucky Industrial College in Paducah. This educational facility prepared young African Americans to teach in black common or public schools. In 1918, the institution received state funding because of the region's isolation from Frankfort's Normal School. The legislature merged the school with the Kentucky State College for Negroes in 1938, creating a four-year institution in Frankfort. The West Kentucky Industrial College converted into a post-secondary vocational school located near Rowlandtown in Paducah. The Paducah Junior College, which served the white students started as a private institution in 1932. The city provided funding four years later and the school became public. In 1968, the institution was absorbed into the University of Kentucky's community college system.[21]

Further boosting of the county's economy occurred in the 1940s and 1950s. The Kentucky Ordnance Works (KOW) was constructed in McCracken County during World War II. The KOW was located on 16,000 acres approximately sixteen miles from Paducah.

Paducah proudly featured its status as the "Atomic City" once the Gaseous Diffusion Plant started operations near the city. (Source: Private Collection).

This plant produced Trinitrotoluene (TNT) for the U.S. war effort.[22] In 1944, the Tennessee Valley Authority (TVA) completed the Kentucky Dam on the Tennessee River for hydroelectric power and to prevent flooding that was so pervasive in the region.[23]

Following the war, the Atomic Energy Commission (AEC) constructed its Paducah Gaseous Diffusion Plant (PGDP) in McCracken County because of the availability of cheap energy produced by the hydroelectric facility at the Kentucky Dam.[24] Constructed on the former site of the Kentucky Ordnance Plant, the PDGP was opened in 1952 as a uranium enrichment plant for the production of nuclear weapons.[25] On January 6, 1951, the Tennessee Valley Authority began construction of the four-unit Shawnee Steam Plant near the Paducah Plant on the Ohio River to provide a portion of the needed electricity. On February 15, 1951, Electric Energy, Incorporated began construction of the Joppa Steam Plant, in Joppa, Illinois, to also provide electricity to PGDP.[26]

Demand for enriched uranium created by the Cold War spurred an economic and population boom for the area. The PGDP brought 1,600 permanent jobs and 20,000 construction jobs to McCracken County.[27] Between 1950 and 1960, the population increased from 49,137 to 57,306, most of which lived in Paducah and Lone Oak, a suburban community just south of the city.[28] As a result of this dramatic increase in residents, an acute housing shortage

Map showing proximity of PGDP to Paducah. The plant is in the center of the illustration and Paducah is to the right. (Source: "Cultural Resource Survey and National Register Assessment C140 Complex Paducah Gaseous Diffusion Plant McCracken County, Kentucky").

Inside the PDGP plant. The massive influx of workers for this plant and allied industries created a population boom in Paducah. (Source: "Cultural Resource Survey and National Register Assessment C140 Complex Paducah Gaseous Diffusion Plant McCracken County, Kentucky").

became apparent. The AEC quickly constructed a 1,000-room temporary barracks to remedy the situation in the short term. The AEC, then financially backed a 300-apartment unit at Elmwood Court, 100 units at Anderson Court, and 162 houses in the River Oaks subdivision. The Federal Housing Authority (FHA), a federal government agency, recognized the need for increased housing stock created by the presence of the PGDP, and soon provided funding for 500 units at Forest Hills, 128 at Fair Oaks, 76 units at California Court, and 76 units at Paducah Apartments.[29] With the growing need for housing, prefabricated house dealers opened businesses in Paducah. At least six prefab dealers were listed in Paducah by 1952 though the manufacturers that they represented were not identified.

Paducah Prefab Dealers
K-M Distributors, Inc., 111 N. 6th Street, Paducah, KentuckyRobert Mattingly, Inc., Route 6, Lone Oak Road, Paducah, Kentucky
New House Constructers, Inc., Taylor Building, Paducah, Kentucky
South Side Homes, 2025 S. 28th Street, Paducah, Kentucky
Roe Wilkins, St. John Road, Paducah, Kentucky
Woodland Homes Company, 742 Thompson Avenue, Paducah, Kentucky[30]

According to the 2000 U.S. Census, McCracken County's pre-1939 housing stock contained 3,576 units or 11.8% of its total residential inventory. For the period encompassing 1940 to 1959, the total amount of housing units represented is 7,566 or 24.9% of the county's total housing stock.[31] This period represents Paducah's largest growth in housing, which coincides with the development of the U.S. Atomic Energy Commission's gaseous diffusion plant in 1951. The PGDP and other support industries located in the area bolstered the expansion of Paducah's workforce during the 1950s.[32]

Right: Map showing areas where historic resources were recorded during Paducah field work. The black squares indicate where prefabricated dwellings were identified. (Source: Paducah Department of Planning).

Survey Findings

Methodology

Paducah was selected as the focus of fieldwork for this report because of its status as the largest urban and suburban area in the Jackson Purchase. Paducah is located in close proximity to the Sears mill in Cairo, Illinois that produced precut houses. Also within distribution range of Paducah, the prefab manufacturers of Gunnison Homes and National Homes increase the likelihood that prefab examples would be identified. Two events that brought economic growth to Paducah, and therefore heightened the need for worker housing, occurred during the research period between 1900 and 1960. Paducah's first large employer, the Illinois Central Railroad (ICR) Company, constructed the railroad shop's facility in 1927. This expansion was during the period when precut houses were in high demand. Paducah also had undergone rapid growth in the early 1950s with the construction of the AEC plant, which created housing shortages. Again, this time frame coincides with the height of prefab housing development, especially with regard to panelized and sectional types, in the post-World War II era.

In order to find extant prefab resources, The Kentucky Heritage Council's (KHC) Historic Resources Inventory was consulted to confirm whether any prefab houses had been previously surveyed. A total of 42 residential resources associated with the period between 1900 and 1924 were located in the KHC Inventory. From the period between 1925 through 1949, a sum of 193 historic residential resources had been surveyed. Only 15 residential resources dating from the period 1950 and 1974 had been previously identified. For all resources associated with prefab manufacture in the KHC Historic Resources Inventory, only one had been identified as a Gunnison House, located at 354 Forest Circle (MCNP-849). A total of two primarily residential districts from the period between 1900 to 1956 have been listed in the National Register of Historic Places. Neither of which identify prefabricated resources.

Local histories, Sanborn Fire Insurance Maps, National Register nominations, historic maps and Section 106 Reports were consulted to trace the history and development of the city. Neighborhoods that were constructed during the research period of 1900 to 1960 were given special consideration for fieldwork. These local areas included Afton, Avondale, Arcadia, California Apartments, Colonial Heights, Forest Hills, and River Oaks.

Neighborhoods located in proximity to the ICR railroad shops, in the vicinity of Kentucky Avenue, were also identified for survey.

In developing the survey for Paducah, project staff consulted with local contacts to aid in the identification of prefab resources. Chris Black, Sharon Poat, Corrine Harber, and David Frost assisted in the survey by helping to locate areas thought to have prefab houses. Additionally, a newspaper article authored by Brian Peach appeared in the *Paducah Sun* announcing the survey project and project staff contact information. This article yielded eight calls from property owners who believed they lived in prefab houses in Paducah. An additional local property owner contacted project staff about a semi-rural resource associated with precut manufacture. These nine local contacts provided information about individual resources as well as neighborhoods where prefabricated housing was located in Paducah. Two of these contacts claimed to have *precut* associated houses while the other seven had houses associated with *panelized* prefab houses. This proportional sample, though small, does represent the historical growth trends in Paducah noted in the 2000 census, with most of the town's older housing constructed in the mid-century and thus reflecting a larger number of panelized prefabs.

From this collected information, areas were mapped for planned fieldwork. A windshield survey was conducted in late February prior to more intensive investigation. Local contact, Chris Black, accompanied project staff on a few trips to areas thought to have prefab houses. This helped to confirm which areas should receive more intensive survey. Some individual resources were also located during this windshield survey. Local contacts were unable to locate the area known as Colonial Heights and Afton. The River Oaks development appeared to contain conventionally constructed houses. The areas of Avondale, Arcadia, California Apartments, Forest Hills, Cornell, and Brookhaven were confirmed to contain prefab resources. Additionally, the 2500-2700 blocks of Madison and the area bounded by HC Mathis Drive, Mildred Street, Oak Grove Cemetery, and Park Avenue were found to contain prefab houses. An area bounded by 13th Street, Reed Avenue, Rudy Avenue, and 14th Street also contained some examples of prefab houses constructed in the 1960s and 1970s.

In March 2006, project staff conducted fieldwork in the areas identified from the windshield survey and local contacts. A total of nine resources were intensively surveyed, including interior investigation and measured drawings. Four additional sites were surveyed, but only from the exterior. In addition, survey in ten neighborhoods containing approximately

50 to 60 prefab houses was also conducted. Though these resources were not intensively surveyed, they yielded information about varying prefab models. A majority of the resources surveyed date from the period between 1950 and 1974. This time frame reflects the era of growth in Paducah spurred by the establishment of the AEC plant during the 1950s.

Precut Property Types

Attempts to survey houses associated with precut manufacturers proved to be somewhat difficult. Precut houses by design appear similar to conventionally constructed residences. There is no one distinguishing characteristics such as materials, architectural details, or building form that can be used to confirm most precut houses from the exterior. Though these characteristics might point the researcher to a particular precut model, it is not enough information to make the conclusion. To positively identify a precut house, more intensive work is required, including interior inspection, taking measurements, and potentially deed research. Though property owners might believe that a house is from a particular manufacturer, intensive documentation is needed to confirm the claim. A total of four resources were identified for their possible association with the precut property type during the fieldwork including two that were identified from local contacts. Additionally, two neighborhoods were surveyed for precut houses.

This house at 630 West Jefferson (MCNP-945) was originally thouught to be a Sears precut house, however, closer inspection revealed that it was not.

The first resource (MCNP-945) was a bungalow constructed in 1925 located at 630 West Jefferson. The property owner believed the house was a Sears "*Vallonia*." The one-story, three-bay house has a brick foundation and a brick veneer exterior. It has a side gable roof covered with asphalt shingles. A first-story porch, typical of bungalows, spans the façade. A gable-front dormer is located above the porch in the unfinished attic space. A frame addition constructed in the 1970s is located on the rear of the house.

Though the floor plan for this house resembles the published Sears *Vallonia*, closer inspection of the property did not yield any confirmed association with this precut model. The basement was examined for stamped lumber on the joists as well as the backside of the basement staircase, but no markers were found. The fenestration pattern on the façade was simi-

Sears "Vallonia" from the catalogue. There were several differences between MCNP-945 and the Sears model including window patterns, porch detailing, and overall measurements. (Source: Private collection).

lar to the *Vallonia* but it did not exactly match the w/w/d/w (window/window/door/window) pattern found on the Sears model. This property had a w/w/d/w/w organization on the front façade. The detailing on the porch columns also did not match the *Vallonia* scheme. Project staff measured the exterior dimensions of the property and found that these are 28-ft. by 36-ft. These exterior dimensions did not match the *Vallonia's* 26-ft. by 34-ft. footprint. The property owner provided deed records for the property, which confirmed the 1925 construction date. The deed information however did not reveal any association with Sears (or any other precut manufacturer). Project staff checked other prefab manufacturers to see if the Jefferson St. house matched any of these potential models. None of the consulted manufacturers had a model exactly like this resource. Although this property may be associated with another precut manufacturer or local lumber company, the house is not a Sears' *Vallonia*.

The Moody House (MCN-289) is located on Cairo Road outside the urban area of Paducah. The setting is semi-rural, with agricultural land in the vicinity. Constructed in 1938, the house is a one-and-one-half story frame bungalow. The house rests on a concrete and brick foundation. The three-bay house retains its original clapboard siding and has an asphalt shingle side gable roof. A four-columned porch extends the full length of the façade. A triple window gable-front dormer is located above the porch.

This bungalow at 3169 Cairo Road (MCN-289) is located outside of Paducah's city limits.

Typifying a farmhouse bungalow, the Moody House resembles many precut bungalow styles. Thought to be associated with the

precut property type, closer inspection did not reveal any evidence to support this conclusion. Rough-cut oak lumber joists located in the basement would seem to indicate that this house is not a precut model. Precision cut, standardized lumber was a hallmark of the precut production method. Project staff measured the exterior dimensions of the property but have not located any matching model in *Houses by Mail*. Despite these findings, the Moody House retains much of its historic fabric and is an excellent example of a rural bungalow.

The bungalow (MCNP-946) located on the southeast corner of Madison and 16th Street in Paducah closely resembles the Sears "*Osborn*" model that is published in *Houses by Mail*. This house is a one-story, three-bay brick veneered bungalow. It has a gable-front asphalt shingle roof with a cross-gabled porch on the south façade. The unique stucco porch with a flared staircase envelopes the principal east façade. A fluted chimneystack is located on the south façade. The house appears on Sanborn Fire Insurance maps in 1926.

Above: Located at Madison and 16th Street, resource (MCNP-946) is located near the ICR railroad shops and may have been built to serve as worker housiing. It closely resembles the Sears "Osborn" pictured below. The main difference is that the building appears to be reversed in its orientation. Further research and access to the house would confirm whether it is a precut house. (Source: Houses by Mail).

This property could be a Sears precut model identified as an "*Osborn*." The distinguishing characteristics of the porch details, including the columns and the flared chimneystack, follow the *Osborn* typology. The facade fenestration, however, differs from the original version. This could be a function of the original owner's customization of the plan. Without local contact information, project staff were unable to gain access to the interior of this property to confirm positively that this house is actually a Sears *Osborn* model. Based on the visual evidence, this house is likely to be an *Osborn* model.

The two-story, three-bay, frame foursquare house (MCNP-947) located at 127 Farley Place may also be associated with the precut property type. This house has an unusual two-story projecting bay on the façade. Sheathed in clapboard siding, the house has a hipped-roof with a cross-gable over the projecting bay. This unique design closely follows the Sears "*Whitehall*" model published in *Houses by Mail*. Project staff were unable to gain access to the interior of this property to confirm positively that this house is actually

a Sears *Whitehall* model. Based on visual evidence, the fenestration pattern and the chimney placement do match the model offered in the Sears catalogue suggesting that this house could be a *Whitehall*. Without local contact information, this house could not be measured to positively confirm that it matches the *Whitehall's* actual dimensions.

The area bounded by Kentucky Avenue, 21st Street, M.L. King Jr. Drive and 13th Street, which is located near the ICR railroad shops, was investigated. This area was mentioned in local history sources as an area of ICR worker housing. The other neighborhood, Arcadia, which includes Wallace Lane, Sycamore, and Cedar Lane, was also surveyed. This neighborhood had served as residence for the managers and executives of the ICR railroad shops.[33] Several houses in these neighborhoods resembled precut house property types and were constructed in the 1910s and 1920s. Further detailed research would be required to positively identify these residences as precut property types. Due to the time constraints for this report, further research could not be undertaken. The survey in these neighborhoods illustrates the improbability of identifying this property type from the exterior alone, even with the assistance of field guides, and suggests that a more intensive survey needs to be done to confirm precut status.

Top picture: This house at 127 Farley Place (MCNP-947) closely resembles the Sears "Whitehall." The unusual two-story bay window is a distinguishing characteristic. Access to the interior of the house would help to verify if the floor plan matches the Sears model pictured above. (Source: Houses by Mail).

Sanborn Map showing the area near the ICR railroad shops. This area contains housing built for the railroad employees some of which maybe precut prefabs. (Source: Sanborn Maps, LLC).

Panelized Property Types

Identifying prefab houses that are associated with the panelized production method can be easier than precut property types. Though, it is important to recognize that not all panelized house manufacturers included distinguishing exterior characteristics on their house models. This is probably a function of some panelized houses conforming to popular architectural standards rather than attempting to "stand-out." Also prefab manufacturers had a desire to separate from the defense-housing stigma that associated prefabs with cheap, temporary housing during World War II.

In Paducah, several different types of panelized prefabs were identified, including Gunnison Homes and National Homes. Additionally, a potential type of panelized prefab was documented within a larger neighborhood of similar houses, but the specific manufacturer remains unknown. More research will have to be done to uncover whether this housing is in fact associated with a prefab manufacturer.

Based upon our survey results and research done in other areas if the state, panelized prefabs have two different customers. One is the customer who received a catalogue or toured a model house, purchased one, and then placed it in a neighborhood that contained conventionally-built housing. These customers were typically middle-class to upper middle-class and their housing was selected from the higher end of the prefab catalogue. The other customer for panelized prefabs purchased the house from a developer who constructed neighborhoods of prefabs. This customer was typically working class or middle class and the houses were conceived to be "starter homes." Geographically, this means that most high-end panelized prefabs are found incognito in upper middle class residential subdivisions, while neighborhoods of similar small prefab houses can be found in working and middle class suburbs. In Paducah, both types of panelized prefab customers can be found.

Gunnison Prefabs

Gunnison Homes are probably the easiest to identify since they have easily recognizable details, including sheet metal chimneys and distinctive detailing. In total, five higher-end Gunnison houses were identified in upper middle class residential areas. Two of these properties were intensively surveyed. Three working and middle class neighborhoods of Gunnison houses also received documentation. Within these areas, approximately 100 Gunnison houses received reconnaissance survey and three Gunnison resources were

intensively surveyed. One of the neighborhood developments consisted of a collection of 38 Gunnison duplexes, a type that was unknown to researcher previous to this project. Unfortunately, access to the interiors of these models could not be secured.

The house at 3905 Alben Barkley Drive, historic resource (MCNP-948), shows the main block of this Gunnison house, breezeway, and garage.

Located on the 3905 Alben Barkley Drive, this Gunnison House (MCNP-948) represents the upper middle class consumer. This house is a deluxe type with numerous manufacturer additions. The one-story, eight-bay house has a panelized structure and clapboard siding, and was constructed in the early 1950s. The house sits on a poured concrete foundation and has a basement. The side gable roof has asphalt shingles and two sheet metal vent chimneys. The interior plan is a three bedroom, two bath model. Original additions include a breezeway, a screened porch, a "wind-o-wing" (or a room addition), and a double garage. Additional architectural detailing also adorns the house with the metal porch guardrail, brick chimney, and front door hood. The homeowner paid extra fees to have these additions for the house. This property retains a significant amount original materials and its original design.

This Gunnison house at 250 Friedman Lane (MCNP-949) has been greatly altered resulting in a loss of integrity.

The high-end Gunnison (MCNP-949) surveyed in the 250 Friedman Lane has been altered dramatically and is not eligible for the National Register of Historic Places. Originally a three-bedroom model, this Gunnison has received two different additions, the floor plan has been reoriented, and most of the historic fabric has been removed. The exterior has lost its Gunnison appearance making it unrecognizable as a panelized prefab.

Two high end Gunnison houses on Minerva Place and one on 38th Street were identified through windshield survey. Both properties on Minerva (MCNP-950 and MCNP-951) had some degree of alteration, including changes in form and materials. The 315 38th Street Gunnison (MCNP-952) was originally owned by local Gunnison dealer Jack Rottering and was used as a model home. Attempts to gain access to this house were unsuccessful. This house was constructed with a breezeway and single-car garage as well as a brick chimney and

front door hood. It appears to have retained its original materials and form.

As noted previously, developers constructed neighborhoods of panelized prefabs for purchase by working and middle class families. These houses were typically basic models with two-to-three bedrooms and no customization from the manufacturer. Due to the influx of workers for the AEC plant and its allied industries around Paducah in the mid-1950s, there are several neighborhoods of panelized prefab housing. Panelized prefab neighborhoods developed primarily with Gunnison houses are described below.

In the neighborhood bounded by HC Mathis Drive, Mildred Street, Oak Grove Cemetery and Park Avenue, several Gunnison houses were identified. The Kentucky Mortgage Company developed the area with three-bedroom Gunnison Homes for workers in the chemical industries. Many have some degree of alteration but still retain an adequate amount of integrity to convey their historic association as prefab housing. The neighborhood has rear service alleys to access the houses and garages added later in the mid-1950s.

634 Minerva Place (MCNP-950) has had some changes over time making it virtually unrecognizable as a Gunnison. The sheet metal chimney is intact..

This Gunnison at 505 Minerva Place (MCNP-951) has had its original windows replaced with non-historic windows.

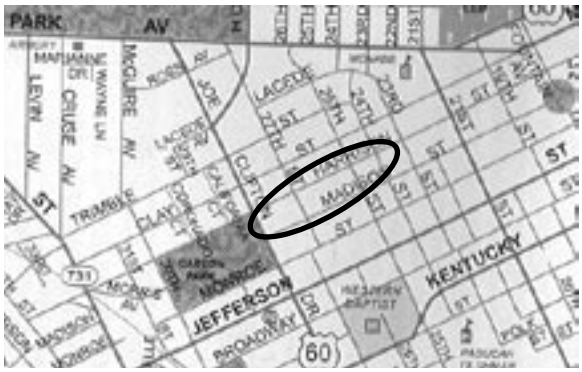
At 315 38th Street (MCNP-952) has retained much of its historic fabric. This house served as a model house for Gunnison dealer, Jack Rottering.

Map showing area developed by the Kentucky Mortgage Company. Photo showing some of the Gunnison houses in the neighborhood along Park Avenue. (Source: Engels Maps, Inc., "Paducah").

Pictured above: This Gunnison house at 936 N. 26th Steet (MCNP-953) has had some alteration to its original materials and design. Pictured below: This registration plate was found in the utility room of this Gunnison house.

Within the 900 block of North 26th Street, located within the Kentucky Mortgage Company subdivision, project staff was able to intensively survey a Gunnison house constructed in 1951. The one-story, five-bay panelized Gunnison (MCNP-953) has aluminum siding. The house is on a concrete slab foundation. The side gable roof is sheathed with asphalt shingles and surmounted with a sheet metal chimney vent. A cross-gable porch and replacement vinyl windows were added in 2001. The interior has three bedrooms and one bath. The Gunnison metal registration plate is intact in the utility room. While the basic form of the house is intact, changes in materials have altered the original appearance of this house.

The 2500-2700 blocks of Madison Street is another area that contains a collection of Gunnison Houses. Approximately 50 houses are located within this neighborhood thought to have been originally owned by the Tennessee Valley Authority and developed as worker housing for the AEC plant. There are rear service alleys to access the houses and garages. Project staff intensively surveyed two houses in the 2500 block. Most of the Gunnisons in this neighborhood have had some alterations to original materials, though many have retained their original design to express their historic association with prefabricated housing.



Map illustrating the area containing the Madison Street Gunnison neighborhood. (Source: Engels Maps, Inc., "Paducah"). Photo above: Gunnison houses located along Madison Street.

Both houses (MCNP-954) and (MCNP-955) are one-story four-bay panelized dwellings, located directly next door to one another. The houses have side-gable roofs and single sheet metal chimney vents and are constructed on concrete slab foundations. These houses are three bedrooms and one bath models. Gunnison metal registration plates are located in the respective utility rooms. Located

at 2536 Madison Street, this Gunnison (MCNP-954) was constructed in 1951 and originally had asbestos-cement shingles for exterior sheathing, which has been replaced with aluminum siding. The house retains its original windows and the interior panels and trim are left unaltered. The Gunnison at 2540 Madison Street (MCNP-955) was constructed in 1952 and retains its original asbestos-cement shingles for exterior sheathing. The rest of the house also retains its original windows and the interior panels and trim are left unaltered. This particular house features an original picture window in the living room. The metal registration plate is also intact in the utility room. Both of these historic resources have retained their original form and a majority of their historic materials are intact.

This Gunnison at 3536 Madison Street (MCNP-954) has retained much of its historic fabric including the original steel windows. Shown from the rear elevation.

Located at 2540 Madison Street, this historic resource (MCNP-955) has had very few changes over time and still has its original siding.

Map illustrating the site plan of the Clayton Park Apartments (MCNP-956) featured on the following page. There are thirty-eight buildings that are Gunnison duplexes. (Source: Heather Wyatt).

The Clayton Park Apartments (MCNP-956) located in the 2900 block of Clay Street, which also includes California Court and Coronado Court are Gunnison duplexes. Originally developed as the California Apartments in response to the housing shortage caused by the AEC plant, 38 Gunnison duplexes were built. Most are two-bedroom models but there are 12 three-bedroom models in the complex. The duplexes are one-story, four-bay panelized Gunnison models. The exterior sheathing is a combination of asbestos-cement shingles and vinyl siding. The side-gable roof has asphalt shingles and two sheet metal chimney vents. Each unit has a large wood-framed picture window that appears to be original. The units are arranged to create rear courtyards. Access to the interior of these models was not achieved. Overall, the entire development appears to have retained much of its original appearance in design and materials. There have been no inappropriate additions or dramatic changes in materials to dramatically impact the historic appearance of these duplexes.

The Clayton Park Apartments in the 2900 block of Clay Street (MCNP-956), formerly named the California Apartments, retain much of their historic fabric including windows, sheet metal chimneys, and building footprints.

National Homes

Two working and middle class neighborhoods were identified in Paducah associated with National Homes. The Cornell Development and Brookhaven, which are located next to each other, both contain a large assembly of National Homes from the "Thrift" line. Located in south end of Paducah off Old Mayfield Road, these neighborhoods were constructed in the early 1950s for AEC plant employees. A local informant could be found for the Cornell development, less is known about the Brookhaven neighborhood.

The Cornell development features four different National Homes models, which are single-story panelized prefab houses. According to local informants, the developers of the neighborhood limited the number of models that could be selected by the house buyer and stipulated that they must be National Homes. As expected, some alterations to materials and form have occurred since they were originally constructed. Despite these changes, the

Inset Map: Showing the area that contains both the Cornell Neighborhood and Brookhaven Neighborhood. (Source: Engels Maps, Inc., "Paducah,").

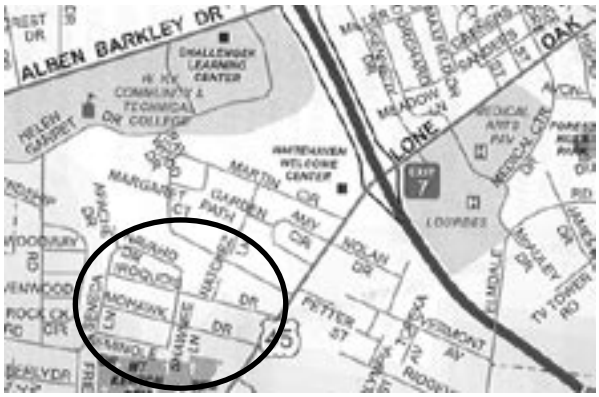
Photo right: National Houses in the Brookhaven Neighborhood. Several different "Thrift" models are evident.

Photo right: National Houses in the Cornell Neighborhood. The house on the corner still has exposed panels.

neighborhood as a whole conveys an historic association with postwar prefab neighborhoods of the 1950s.

One house in the 3000 block of Old Mayfield Road (MCNP-957) of the Cornell Development was accessible for intensive survey by project staff. This is a one-story four-bay National Homes *Fenton* model, panelized house constructed in 1952 for $7600. A registration plate on the interior positively identified the house as a National Home with the serial number 39846. It has a side-gable asphalt shingle roof with a single sheet metal chimney vent. Projecting from the front façade, a cross-gabled porch was added in 1977. Side and rear frame additions were also added during this period. The original windows, including a wood framed picture window and asbestos cement siding have been retained. Original interior fabric, such as panels and battens, remain in place.

Picture above left: The National House in the 3000 block of Old Mayfield Road (MCNP-957) soon after the prefab was built. (Source: Private collection). Picture above right: The house as it is in March 2006. Some alterations have been made including the addition to the left and the cross-gabled porch. Picture left: The original registration plate for the house found inthe utility room.



Another neighborhood on Lone Oak Road was also surveyed for prefab housing. Mohawk Drive, Iroquois Drive, Seneca Lane, and Shawnee Lane define the area. Residences in this development appear to be associated with panelized prefab manufacture and may be associated with National Homes. Five different single-story models (MCNP-958 through MCNP-962) were observed. The houses have poured concrete foundations and are sheathed with a variety of siding materials. Interior investigation was not conducted because there were no local contacts in this neighborhood.

Left: 181 Mohawk Drive (MCNP-958)

Right: 159 Mohawk Drive (MCNP-959)

Left: 153 Mohawk Drive (MCNP-960)

Right: 154 Mohawk Drive (MCNP-961)

Inset map: Illustrates the neighborhood located off Lone Oak Road. (Source: Engels Maps, Inc., "Paducah"). Photos: These houses are located in the neighborhood containing Mohawk Drive. There were five different houses identified thought to be National Homes.

Right: 171 Mohawk Drive (MCNP-962)

Other Prefabs

The Forest Hills neighborhood also contains unidentified prefab houses. Constructed in the early 1950s for AEC plant housing and funded by FHA loans, four different types of houses were built. The development is now owned by the city of Paducah and the houses are rented. One house in the neighborhood was surveyed for this study, though the manufacturer has not been identified. The house at 1041 Elmdale Road (MCNP-963) is located in the Forest Hills neighborhhood. It is a one-story, three-bay dwelling with an overall footprint of 25' by 30'. The house is situated on a concrete slab foundation. Originally sheathed with clapboard siding, the house's exterior has been replaced with vinyl siding. This house is a two-bedroom, one bath model. There was no registration plate located in the interior to signify the company that manufactured these houses. More research needs to be done to ascertain whether this neighborhood was developed with tract housing or with a particular type of panelized prefab.

Inset Map: Shows the area containing the Forest Hills neighborhood. (Source: Engels Maps, Inc., "Paducah"). Photo above: The rear yards of the Forest Hills neighborhood are shared creating a communal green space. Photo left: Resource (MCNP-963) at 1041 Elmdale Road. At this time the prefab manufacturer for this house has not been identified.

Map showing the neighborhood associated with WKIC professors and trades people. The area is bounded by Noble Park and Rowlandtown. (Source: Engels Maps, Inc., "Paducah").

Other prefab houses were identified in the project area that are associated with African American history. In particular, an entire African American neighborhood containing some prefabs, surrounding the former West Kentucky Industrial College (WKIC), was discovered by project staff, thanks to local historian Corrine Harber. This neighborhood, bounded by North 13th Street, Reed Avenue, Rudy Avenue, and 14th Street, was developed by WKIC professors at the college and professional/trades people, such as brick masons and architects with a mix of self-built homes and prefab dwellings in the 1960s and 1970s. According to Ms. Harber, prefab housing was a preferred housing option for black Paducah residents because of difficulty obtaining traditional mortgages at good rates, due to discriminatory lending practices and redlining. Prefab houses, on the other hand, could be purchased from a manufacturer who did not necessarily know the buyer's race. In turn, these structures were placed in traditional African American neighborhoods. Though these houses were built significantly later than the end date of this study in 1960, they do provide illuminating information about how prefabricated housing might have been used in minority communities.

The original owners of this prefab house at 1353 Rudy Avenue, (MCNP-964) added the carport and brick veener after its initial construction.

The Harber house (MCNP-964) at 1353 Rudy Avenue is a prefab house constructed in 1966 by Johnny and Corrine Harber. The Harbers selected the house out of a catalogue and had it delivered to the house site, complete with windows and doors installed. Mr. Harber, who was a brick mason trained at the local college, completed the house with a brick veneer shortly thereafter. This one-story ranch house cost $11,000, a hefty sum for the mid-1960s. Ms Harber was not sure which manufacturer prefabricated the house; however, she did note that this type of housing was preferred in the community, due to lending practices and the great pool of skilled craftspersons able to assist with finishing off the prefab house.

One additional house located in this neighborhood at 2315 13th Street off of HC Mathis was surveyed for this project that was outside the study time frame of 1900 to 1960. The house (MCNP-965) was constructed in 1970 as a prefab model house for the African American community leader W.C. Young. Local developer Martin Conrad constructed the house. The prefab manufacturer is unidentified but the house resembles models offered by

Historic resource (MCNP-965) at 2315 13th street is associated with African American history and prefab housing. This model house has three bedrooms. A rear addition was constructed in 2005.

National Homes and Capp Homes during this later post-1960 period. It is a Colonial Revival-styled tri-level house. Brick veneer is used on the first story while the upper story is clad in wood siding. The main block of the house has three bays and two-story, four columned porch. A two-car garage extends out from the main block on the west side. On the east side, a single-story wing extends from the main block with a projecting bay window.

Sectional Property Types

No sectional property types were identified in Paducah during the course of this fieldwork.

Preassembled Property Types

No preassembled property types were identified in Paducah during the course of this fieldwork.

Integrity Evaluations of Panelized Resources

The field work conducted for this study yielded sufficient data to allow *panelized* prefab houses to be evaluated for integrity. A number of neighborhoods containing panelized prefabs were documented to provide for a good comparative baseline. As determined at the beginning of this section, integrity of **design**, **materials**, and **workmanship** are essential for the eligibility of panelized prefab houses.

These resources are being evaluated under Criterion A for their association with the growth and development of Paducah neighborhoods in the mid-twentieth century. Keep in mind that these resources could also be eligible under other historic contexts. The following text will give the researcher model integrity evaluations.

Comparing two Gunnison houses that were built by individual customers allows an examination of integrity considerations when dealing with panelized prefab houses. Historic resource at 3905 Alben Barkley Drive (MCNP-948) has retained a high level of integrity of **design**. Reflecting the manufacturer's original design intentions, this Gunnison "Deluxe" house has retained its original form. Many of the options that were available from Gunnison also remain intact. The house also retains a high level of integrity of **materials**. The original

steel windows are intact. The optional details including shutters, railings, and fireplace remain with the house. Though the house is sheathed in aluminum siding, this material is not out of character with original cladding materials and does not cover important architectural details. Integrity of **workmanship** is evident on the interior of the house with visible seams that distinguish the panels. The breezeway also illustrates the production methods of panelized prefabs with removable panels that open the space as weather permits. Based on these integrity considerations, this historic resource would be eligible for the National Register of Historic Places.

3905 Alben Barkley Drive (MCNP-948).

By comparison, the Gunnison house at 250 Friedman Lane (MCNP-949) has lost a significant amount of historic fabric and does not meet the established integrity considerations. The loss of **design** integrity results in the large addition located on the side of the house and the complete alteration to the original floor plan. Additionally, the window openings were enlarged and the entrance was altered. Loss of **materials** also has impacted integrity. The original steel windows were removed and replaced with non-historic windows. The sheet metal chimney, original breezeway, and fireplace, distinctive manufacturer's additions, have been removed. The loss of **workmanship** is also evident since there is no visible evidence of the original modular panels. This house would not be eligible for the National Register of Historic Places.

250 Friedman Lane (MCNP-949).

A comparison of historic resources located in a developer neighborhood of Gunnison houses also helps to see how integrity considerations are applied. The house (MCNP-955) located 2540 Madison Street has retained a high level of integrity of **design.** The original form of the house remains intact. There have been no additions or alterations that have changed the original design intention of the manufacturer. A high level

2540 Madison Street (MCNP-955).

of integrity of **materials** has also been retained. The original asbestos shingles applied by the owners remain in place. The steel windows and large picture window that was included with this Gunnison model are intact. The integrity of **workmanship** is less evident on the exterior, but on the interior the plywood panels are clearly delineated by the joint seams at regular intervals. Integrity of **location** is intact since the house remains on its original site. Also integrity of **setting** is underscored by the surrounding neighborhood of Gunnison houses that remain conveying that the neighborhood was developed by a single individual for worker housing. Based on these integrity considerations this resource would meet the registration requirements for prefab houses.

The Gunnison house (MCNP-953) at 936 N. 26th Street is also located in a developer neighborhood. This resource has experienced some alteration that has had an impact on integrity. While the basic form of the house has not been changed, the addition of the cross-gabled porch has changed the original appearance of this modest house. Non-historic shutters have been added which were not originally included with the house but the interior floor plan is intact. The integrity of **design,** therefore, is at a moderate level. The integrity of **materials** has been most significantly impacted. The original casement windows have been replaced with six-over-six vinyl sash windows. Vinyl siding was also added, replacing the original cladding materials on the exterior. Though, the original manufacturer's sheet metal chimney is still in place. For integrity of **workmanship**, evidence of the original panels has been diminished. On the interior, the plywood panels have been covered with wallpaper concealing the joint seams. The house has not been moved and has retained integrity of **location**. The integrity of **setting** also remains intact since the Gunnison houses in the neighborhood remain relatively unchanged. This house would probably not individually meet the integrity considerations for prefab houses, however, when considered in a district this house might be a contributing resource.

936 N. 26th Steet (MCNP-953).

Summary

The survey of prefabricated resources in Paducah located in McCracken County revealed several National Register of Historic Places eligible historic properties. Local historic contexts identified for the significance of prefabricated housing related to the development of worker housing associated with industrial growth, African American self-built suburbs associated with ethnic history, and architecture that embodies distinctive characteristics of a prefab type. Many resources retain medium to high levels of integrity to convey historic significance. No precut property types were definitively identified during this fieldwork. If further intensive level survey could be conducted, potentially eligible resource might be identified. The two historic resources that could be potentially eligible as precut property types are (MCNP-946) at the corner of Madison and 16th Street and (MCNP-947) located at 127 Farley Place. This would depend on the determination that they are associated with a kit-house manufacturer. These resources would be considered within a context for a Criterion C nomination such as "Sears Houses in Paducah, Kentucky, 1900 to 1940," in the area of architecture.

For the prefabricated worker housing, a property or district could be nominated under Criterion A within a context such as "Residential Housing for the Paducah Gaseous Diffusion Plant in Paducah Kentucky, 1950 to 1955" with significance in the area of industry. Resources that could be considered within this context include the California Apartments (MCNP-956), the neighborhood within the 2500 to 2700 block of Madison including resources (MCNP-954) and (MCNP-955), and the Cornell Neighborhood including resource (MCNP-957). These districts all retain at moderate to high levels of integrity. The Forest Hills neighborhood including resource (MCNP-964) might also be eligible within this context; however, more information about the development of this area would be needed.

Prefabricated housing associated within a neighborhood that also had conventional housing was also found to have an historic context under Criterion A. The self-built African American neighborhood near Rowlandtown including resources (MCNP-965) and (MCNP-966) could be eligible within the context of "Self-built Residential Housing for African Americans in Paducah Kentucky, 1900 to 1970," in the area of ethnic history. The neighborhood is also associated with the West Kentucky Industrial College since many residents were professors or graduates of the college. This context would have to demonstrate exceptional significance of these resources, since they are currently less than fifty years old. Please see

the National Register's guidance on Criterion Consideration G for more information a at http://www.cr.nps.gov/nr/publications/bulletins/nrb15/nrb15_7.htm#crit%20con%20g.

For resources eligible under Criterion C, a context could be developed in the area of architecture. For example, the Gunnison House (MCNP-948) located on Alben Barkley Road is eligible within the context "Gunnison Houses in Paducah, Kentucky 1945 to 1955." This house represents a deluxe Gunnison model and exhibits nearly all of the manufacturer's additions and detailing. This house embodies the distinctive architectural characteristics that define a Gunnison House. The Gunnison house located on 38th Street (MCNP-952) could also be eligible when evaluated within this context since it was a dealer's model home. Historic resource (MCNP-955) at 2540 Madison Street embodies the characteristics of a Gunnison "starter home," which was compact in size and included details like picture windows and exposed interior marine plywood panels. These resources retain high levels of integrity to convey their significance. Some resources evaluated within this context, however, would not be eligible. The altered Gunnison in the 200 block of Friedman Lane (MCNP-949) has had a dramatic loss of integrity. The two Gunnison's located on Minerva Lane (MCNP-950) and (MCNP-951) have also lost integrity making them ineligible within the context. The Gunnison located on North 26th Street (MCNP-953) is also ineligible within this context because of replacement windows and siding . This house might be eligible within a Criterion A context for the neighborhood, however, further research about the neighborhood would be required to identify the significance.

Marshall County

1959 General Highway Map of Marshall County. (Source: Kentucky Department of Highways, Division of Planning).

Marshall County became Kentucky's 92nd county in 1842 and is named for John Marshall, a chief justice of the United States Supreme Court. Livingston, Lyon, Trigg, Calloway, Graves and McCracken counties, as well as the "Land Between the Lakes" recreation area, surround the county. Located in the eastern portion of the Jackson Purchase, the terrain of the county varies from gently rolling hills to level wooded areas and bottomlands. Much of the bottomland on the eastern border of the county along the Tennessee River was flooded by waters from Kentucky Lake created by the construction of the TVA Kentucky Dam.[34]

Until the period after World War II, Marshall County's economic base was almost entirely agricultural. Crops included corn, tobacco, soybeans, and livestock. During the 1930s, the county became a major strawberry producing area, with Benton serving as the distribution center for the industry. Once the Kentucky Dam was built, a tourism and recreation industry developed which contributed to the county's economy.[35]

Benton was established as the county seat of Marshall County in 1842. Named after Thomas Hart Benton, a senator from Missouri, the town was platted on tracts of land that belonged to Francis Clayton and James Bearden. Platted by Philander Palmer in 1842, Benton was incorporated in 1845. Three Additions, Barry's Addition, Cole's Addition and Myers Addition, were annexed into the city limits in the late-nineteenth and early-twentieth centuries.[36]

Benton is sited on a series of seven hills, just to the east and north of rich farmlands along Clark's River. Benton was a small community of just over one hundred inhabitants during the mid-nineteenth and twentieth centuries. Marshall County's economy during the nineteenth century relied primarily on agricultural products. Benton did not have any major industries.[37]

In 1890, the Paducah, Tennessee and Alabama Railroad was constructed and ran within one-half mile of Benton's courthouse. The railroad line eventually became part of the Louisville and Nashville Railroad. The construction of this rail line in close proximity to Benton stimulated the town's economy and spurred industrial growth, earning the town

Courthouse Square and surrounding neighborhoods of Benton, county seat of Marshall County. (Source: History of Marshall County, Kentucky).

the moniker "Trade Center of the County."[38] By the beginning of the twentieth century, Benton had three churches, four dry goods stores, a hotel, and a bank. Local industries had also developed due to the railroad including a carding factory, lumber mill, and flourmill.[39]

During the early twentieth century, the city grew to over 1,000 residents. A series of civic improvements, including a new high school and a courthouse, were constructed during the 1910s. In 1922, Benton attempted to acquire the State Teacher's College, but lost the bid to Murray. The city of Benton built a waterworks and sewer system in 1930.[40]

Throughout the first three decades of the twentieth century, Benton remained a small county seat with a few thousand residents. While the county remained primarily rural in character, Benton served as the governmental and commercial center. New buildings were constructed on the courthouse square such as the Crawford-Ferguson Department Store, Stow Drug Company, and Draffen Motor Company. Small industries like Treas Lumber Company and the Benton Hosiery Mill provided employment in the community.[41] In the 1910s and 1920s, new Bungalow style dwellings replaced many of Benton's older housing stock within the town limits.[42]

By the 1930s, the Louisville and Nashville Railroad ended service to Benton and the tracks and depot were removed. Business slowed during the Depression years, with little new construction occurring in this period. During World War II, some residents found employment in war industries outside of Marshall County, such as the Kentucky Ordnance Works at Paducah. Though the early 1950s spurred some growth and prosperity in Benton, there was not a great demand for new housing.[43] Currently, Benton has a population of approximately 4,000 residents.

Calvert City is Marshall County's second most populated community. Named for Potilla Calvert, Calvert City was established in 1860. Calvert's home "Oak Hill" and surrounding property became the original part of the town. Part of this land was developed for railroad lines which became the main transportation route for the community. The town grew at first as a railroad community with businesses establishing near the rail line. The community boomed in the post-World War II period due to the construction of the Kentucky Dam and the Paducah AEC plant. [44]

Calvert City Heights neighborhood was developed for an anticipated population boom that never really occured. (Source: History of Marshall County, Kentucky).

Soon, numerous chemical plants and allied industries located near the outskirts of Calvert City and the banks of the Tennessee River. Pennsalt was the first chemical company to establish its industrial enterprise near Calvert City. A dozen companies invested more than a billion dollars into the development of Calvert City's chemical plants.[45]

Calvert City incorporated in 1951 as a result of the new growth created by the chemical industries. The population reached 1,225 within the city limits in 1953. The Local Planning Commission at the time projected that the population would grow to 14,000 by 1960. In anticipation of the population boom, planners calculated that the city would need new housing stock since only 408 residences were in the city limits at the time. City planners also determined that 160 housing units would be needed immediately. The area known as "Calvert City Heights" soon developed in response to this housing shortage. The population boom in Calvert City never materialized. Consequently, the need for new housing stock vanished. Most residents in surrounding counties chose to commute to their jobs in Calvert City.[46] The current population is approximately 2,700 residents and 1,100 households.[47]

The TVA began construction of the Kentucky Dam located in Marshall County in 1938 to generate cheap hydroelectric power for the region and to prevent disastrous floods like the one that occurred in 1937. Completed in 1944, the new dam spurred economic development

in the Jackson Purchase region. In the 1960s, the eastern section of Marshall County was inundated along the Tennessee River and became a part of Kentucky Lake. The lake and the area surrounding developed as a tourist destination for water sports recreation. New vacation homes, motels, and restaurants soon dotted the area. The Kentucky Dam Village State Resort Park was constructed to take advantage of the recreational opportunities offered at the lake.[48]

According to the 2000 U.S. Census, Marshall County's pre-1939 housing stock contained 803 units or 5.5% of its total residential inventory. For the period encompassing 1940 to 1959, the total amount of housing units represented is 2,394 or 16.3% of the county's total housing stock.[49] The gains in housing that occurred during this period related to the county's growing industrial base in Calvert City.

The Kentucky Dam photgraphed in March 2006 was constructed by the Tennessee Valley Authority to help prevent flooding and generate power for the region.

Survey Findings

Methodology

Marshall County was selected as the focus of fieldwork for this report because it is considered representative of the rural, agricultural counties in the Jackson Purchase. The county was also selected because very little survey work had been done in the past. Additionally, towns in Marshall County were located in close proximity to the Sears mill in Cairo, Illinois that produced precut houses, and within distribution range of prefab companies like Gunnison Homes and National Homes. This increased the likelihood of discovering prefabricated housing stock in the county. The construction of the TVA Kentucky Dam on the Tennessee River created the possibility that TVA sectional housing might be located in the county.

The Kentucky Heritage Council's (KHC) Historic Resources Inventory was consulted to confirm whether any prefab houses had been previously surveyed. One residential resource associated with the period between 1900 and 1924 was located in the KHC Inventory for Marshall County. This resource (MLB-2), known as the Stilley House, is Marshall County's only residential property listed on the National Register of Historic Places for the period between 1900 through 1956. From the period between 1925 and 1949, no historic residential resources had been surveyed in the county. There were also no resources dating from the period 1950 to 1974 that had been previously identified. Not a single resource associated with prefab manufacture was represented in the KHC Historic Resources Inventory for Marshall County.

Local histories, Sanborn Fire Insurance Maps, historic maps, and Cultural Historic Resource Reports were consulted to trace the history and development of the city. Neighborhoods that were constructed during the research period of 1900 to 1960 were given special consideration for fieldwork. Local history sources indicated that Benton underwent a period of residential construction during the 1910s and 1920s. The possibility that precut property types could have been constructed in the county seat of Benton underscored the need for survey. The neighborhood of Calvert City Heights located in Calvert City was also identified for its possible association with prefab house. Constructed in the 1950s, there was a possibility that panelized or sectional property types would be located.

Map of Benton in 1969. Survey for prefab houses was conducted using these boundaries. (Source: Kentucky Department of Highways, Division of Planning).

Attempts by project staff to establish local contacts to aid in the identification of prefab resources proved fruitless. Calls were made to the local historical society, the library, and the chamber of commerce in an attempt to find possible local informants. No one, however, could recommend a local source at these organizations. A press release was published in the *Tribune-Courier* announcing the survey project and project staff contact information. This article yielded no calls from property owners in Marshall County who might have prefab houses.

From the collected archival information, areas were mapped for planned fieldwork. By using a base map, project staff conducted a combination of windshield survey and even walked through areas that had the potential for prefab housing. Since no local contacts could be made, and because these contacts are vital to gaining access to properties, none of the resources were able to be intensively surveyed.

In March 2006, project staff conducted reconnaissance level fieldwork in the areas identified for the potential of prefab property types. A total of thirteen residential resources were surveyed in Benton. Of these resources, five (MLB-34 through MLB-38) appeared

Above left: 108 14th Street (MLB-34). Above right: 200 14th Steet (MLB-35). These houses may be panelized prefabs. They are small in form and have sheet metal chimneys.

to be associated with panelized prefab property types. The manufacturer of these houses remains unknown, though the resources bear a close resemblance to National Homes. Interior investigation would be required to verify floor plans and to find the metal registration plate. Located together along east Fourteenth Street, these prefab houses appear to have been constructed during the 1950s. Each house had slightly different roof forms and façade treatments. Only two still retained the sheet metal chimney vents. All five of the houses have been altered to some degree with vinyl siding as well as additions.

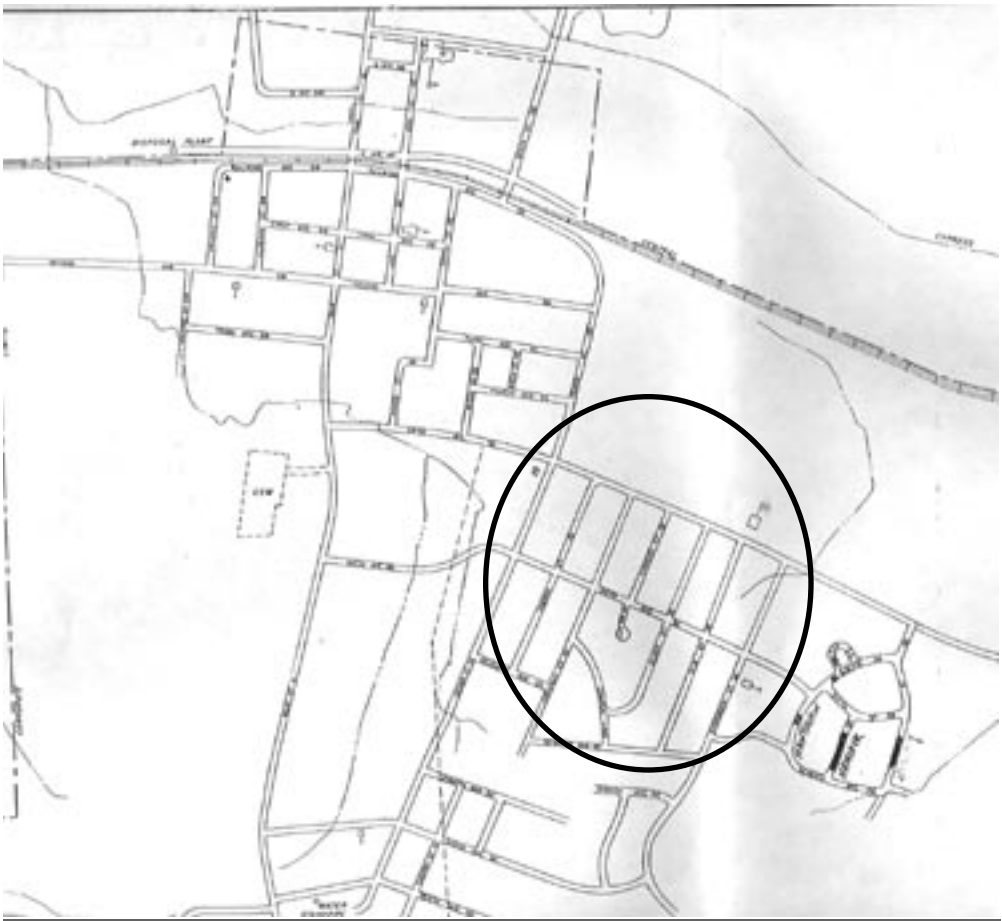
Above left: 204 14th Street (MLB-36). Above right: 208 14th Street (MLB-37). At right: 302 14th (MLB-38). These houses are on the same street as (MLB-34) and (MLB-35). They may have been constructed as worker housing. Further research might reveal which prefab company produced these houses.

Eight resources were identified as potential precut property types (MLB-39 through MLB-46). None of these resources, however, could be positively identified with a particular precut model in field guides like *Houses by Mail,* Gordon-Van Tine's *117 House Designs of the Twenties,* and *Aladdin "Built in a Day" House Catalog, 1917*, due to lack of interior access. These houses appear to date from the 1910 to 1940 period, which was associated with precut house distribution. All of these houses were of frame construction with clapboard siding. One of the resources, a frame, clapboard-sided, front gabled house (MLB-39) was a bungalow-style duplex model. The rest of the seven houses (MLB-40 through MLB-46) were single-family

residences. All were frame construction with either clapboard or asbestos shingle siding. Five of the resources were bungalow-style and two were Tudor Revival influenced. Further research with the assistance of local contacts would be required to confirm whether these resources are an example of precut property types.

Top left: 1053 Elm Street (MLB-39). Top right: 1077 Birch Street (MLB-40). Middle left: 305 10th Street (MLB-41). Middle right: 812 Poplar Street (MLB-42). Bottom left: 104 Poplar Street (MLB-43). Bottom right: 203 12th Street (MLB-44). All of these historic resources were located in Benton near the Courthouse Square. These houses reflect the popular architectural styles of the 1920s and 1930 that precut manufacturers offered. More intensive research would reveal whether any of these resources are precut prefabs.

Top left: 407 12th Street (MLB-45). Top right: 203 9th Street (MLB-46). Both of these historic resources were located on the outskirts of Benton's central business district. These houses may be precut prefabs because of their similarity to houses offered in mail order catalogues.



Map illustrating the town boundaries of Calvert City in 1957. The area in the lower right quadrant with the grid layout of roads is Calvert City Heights. (Source: Kentucky Department of Economic Development.)

Historic resource (ML-3) is located at 24 Aspen Street in the oldest part of Calvert City. This house may be a precut prefab.

In Calvert City, one resource (ML-3) was identified that could be an example of a precut property type. This single-story, three-bay frame house with a clipped, side-gabled roof and clapboard siding is located at 24 Aspen Street. A distinctive brick chimney is on the façade to the left of the arched entrance. A shed addition is located on the rear of the house. This house shares similar characteristics to precut models offered in the catalogues. Project staff were unable to gain access to the interior to record the floor plan or inspect for stamped lumber. At this point, the house cannot be positively identified with a specific precut manufacturer.

The windshield survey of Calvert City Heights indicated that there might be some panelized prefab houses (ML-4 through ML-6) within the neighborhood. All of these resources have had some level of alteration that has impacted integrity. These resources might be associated with National Homes but interior access would be needed to verify the presence of

Left: 662 Elder Street (ML-4). Bottom left: 613 Cypress Street (ML-5). Bottom right: 619 Elm Street (ML-6). Located in Calvert City Heights, these houses may be panelized prefabs. They are similar to some of the National Homes seen in Paducah. Further investigation on the interior might reveal their association.

registration plates. Many houses in Calvert City Heights, however, appear to have been constructed by conventional methods. Perhaps this is related to the reduced need for housing once it was realized there would be no large influx of residents associated with the chemical industries in Calvert City. Since there was not an urgent need for housing, more time was available to construct residences conventionally. Though this area was not intensively surveyed, a few representative panelized prefabs were located and were located in a reconnaissance survey.

Sectional Property Types

Some remaining examples of TVA-associated resources (ML-7) were identified on the property of Kentucky Dam Village State Resort Park. The TVA developed a method for constructing prefab houses in sections. These sections made houses easy to construct once at the site and they could be disassembled and moved to new sites easily. These houses are now used as residences for park employees but were originally used for worker housing during the construction of the Kentucky Dam. Moved to the park site, these resources have been altered with additions, replacement windows and siding significantly impacting their historic integrity. In order to be consider eligibility for the NRHP, these resources would need to be evaluated under the standards outlined by Criterion Consideration "B," which addresses historic resources that have been moved. The National Register's guidance on Criterion Consideration B can be found online at http://www.cr.nps.gov/nr/publications/bulletins/nrb15/nrb15_7.htm#crit%20con%20b.

Above: Original Tennessee Valley Authority House used at the Kentucky Dam construction site. (Source: Kentucky Dam Interpretive Center).

Above: This is one of the original Tennessee Valley Authority Houses used at the Kentucky Dam construction site today. It is now a residence for park employees at the Kentucky Dam Village.

Preassembled Property Types

No preassembled property types were identified in Marshall County during the course of this fieldwork.

Summary

The evaluation of NRHP eligibility for prefab resources in Marshall County remains very provisional at this time. Historic contexts should be developed in the future to aid in evaluation and determine eligibility. At this time, no precut property types were definitively identified during this reconnaissance level survey. If further intensive level survey could be conducted, potentially eligible resource might be identified. The relatively small number of panelized prefab houses are of unclear significance at this time. They could be related to worker housing for some of the surrounding industries in Marshall County. Even if an historic context was developed for some of these resources, they would not retain sufficient historic fabric for integrity. For example, the group of prefab houses in Benton (MLB-34 through MLB-38) has been altered with new additions and replacement windows making the original house unrecognizable. Even though a historic context can be identified for the Tennessee Valley Authority sectional houses, the integrity considerations make some of these resources ineligible for the NRHP, some of the TVA sectional houses at the Kentucky Dam Village have had numerous additions and have been moved.

Conclusion

The results of the survey in these two case study counties illustrate the difficulty in identifying prefabricated houses in the field. Without inside knowledge about a particular area from local contacts, it is challenging to positively document prefab houses. For most prefabricated property types, the effort to "blend in" with conventionally constructed houses was successful. The result of this assimilation makes field identification problematic without interior.

In some cases, however, prefabricated housing can be identified in the field without detailed research. This is especially the case with Gunnison houses and somewhat with National houses (and of course Lustrons though none were identified in these two counties). Prefabs associated with these companies often have distinct signature characteristics that make identification easier. Perhaps as more research is accomplished in this area of domestic architectural history, it will become easier to identify prefab resources.

In terms of evaluation for prefabricated housing, the association with a particular historic context is essential to justify eligibility. Individual prefabs or districts of prefabs should establish significance through local, state, or national contexts related to certain historic events

or a type of architectural design. For prefabricated houses potential contexts could be related to local industrial development, community growth and new types of suburban development, or as example of a particular architectural design. Prefabricated houses, like any dwelling, are subject to alterations that impact integrity. Comparing these prefab resources with others of a similar period and design is important to assess levels of integrity. Character-defining attributes defined by integrity of design, materials, workmanship, location, feeling, and association should be present to convey the historic significance of prefabricated housing.

Endnotes

[1] National Park Service, *How to Complete a National Register Registration Form*, p. 37.
[2] David L. Ames and Linda Flint McClelland, *Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places,* p. 97.
[3] http://www.cr.nps.gov/nr/publications/bulletins/nrb15/.
[4] John E. Kleber, *The Kentucky Encyclopedia*, p. 460-461.
[5] www.wikipedia.com, "Jackson Purchase."
[6] The Kentucky Heritage Council has identified five cultural landscape regions including the Bluegrass, Pennyrile, Jackson Purchase, Ohio River Cities and Eastern Kentucky.
[7] www.wikipedia.com, "Jackson Purchase."
[8] Philip Thomason, "Cultural Resource Survey and National Register Assessment C140 Complex Paducah Gaseous Diffusion Plant McCracken County, Kentucky," p. 1.
[9] Marshall County Genealogical Society. *History of Marshall County, Kentucky,* p. 7.
[10] John E. Kleber, *The Kentucky Encyclopedia*, p. 461.
[11] John E. Kleber, *The Kentucky Encyclopedia*, p. 593.
[12] Fred G. Neuman, *The Story of Paducah* p. 22-23.
[13] John E. Kleber, *The Kentucky Encyclopedia*, p. 593.
[14] Camille Wells, "A History of Paducah and McCracken County" p. 11-12.
[15] John E. Kleber, *The Kentucky Encyclopedia*, p. 705.
[16] Camille Wells, "A History of Paducah and McCracken County" p. 13.
[17] Marion B. Lucas, *A History of Blacks in Kentucky,* p. 20-22
[18] John E. Kleber, *The Kentucky Encyclopedia*, p. 705.
[19] John E. Kleber, *The Kentucky Encyclopedia*, p. 705.
[20] Camille Wells, "A History of Paducah and McCracken County" p. 19.
[21] John E. Kleber, *The Kentucky Encyclopedia*, p. 706.
[22] Philip Thomason, "Cultural Resource Survey and National Register Assessment C140 Complex Paducah Gaseous Diffusion Plant McCracken County, Kentucky," p. 10.
[23] John E.L. Robertson, *Paducah, 1830 Ð 1980: A Sesquicentennial History,* p. 102-103.
[24] John E.L. Robertson, *Paducah, 1830 Ð 1980: A Sesquicentennial History,* p. 102-103.
[25] Philip Thomason, "Cultural Resource Survey and National Register Assessment C140 Complex Paducah Gaseous Diffusion Plant McCracken County, Kentucky," p. 1.
[26] Philip Thomason, "Cultural Resource Survey and National Register Assessment C140 Complex Paducah Gaseous Diffusion Plant McCracken County, Kentucky," p. 11.
[27] Philip Thomason, "Cultural Resource Survey and National Register Assessment C140 Complex Paducah Gaseous Diffusion Plant McCracken County, Kentucky," p. 10.
[28] John E.L. Robertson, *Paducah, 1830 Ð 1980: A Sesquicentennial History,* p. 102-103.
[29] William Ray Mofield, "The Atomic Age Comes to Paducah," p. 23.
[30] Glenn H. Beyer, *Practices and Precepts of Marketing Prefabricated Houses,* p. 57 Ð58.
[31] U.S. Bureau of Census, Census 2000,"Profile of McCracken County's Housing Characteristics," p. 4.
[32] Philip Thomason, "Cultural Resource Survey and National Register Assessment C140 Complex Paducah Gaseous Diffusion Plant McCracken County, Kentucky," p. 12.
[33] Camille Wells, "A History of Paducah and McCracken County" p. 11-12.
[34] John E. Kleber, *The Kentucky Encyclopedia*, p. 611.
[35] John E. Kleber, *The Kentucky Encyclopedia*, p. 611.
[36] Leon Lewis Freeman and Edward C. Olds, *The History of Marshall County,* p. 8.
[37] Leon Lewis Freeman and Edward C. Olds, *The History of Marshall County,* p. 8.
[38] J.R. Lemon, *Lemon's Hand Book of Marshall County,* p. 79.
[39] Marshall County Genealogical Society, *History of Marshall County, Kentucky,* p. 18.

[40] Leon Lewis Freeman and Edward C. Olds, *The History of Marshall County,* p. 133.
[41] Sanborn Fire Insurance Maps, *Benton,* 1925, 1941.
[42] Leon Lewis Freeman and Edward C. Olds, *The History of Marshall County,* p. 133.
[43] Leon Lewis Freeman and Edward C. Olds, *The History of Marshall County,* p. 136.
[44] www.wikipedia.com, "Calvert City, Kentucky."
[45] Marshall County Genealogical Society, *History of Marshall County, Kentucky,* p. 7.
[46] Marshall County Genealogical Society, *History of Marshall County, Kentucky,* p. 10-11.
[47] www.wikipedia.com, "Calvert City, Kentucky."
[48] Leon Lewis Freeman and Edward C. Olds, *The History of Marshall County,* p. 132-133.
[49] U.S. Bureau of Census, Census 2000, "Profile of Marshall County's Housing Characteristics," p. 4.

Section IV. Conclusion

Summary

In considering the historic significance of prefabricated housing, its role on the American cultural landscape must be understood. Prefab housing contributes to our understanding of the transformation from traditional building methods of the nineteenth century to industrialized, mass-produced construction techniques of the twentieth century. Much of the industry's research and development concentrated on how to find low-cost and efficient ways to build housing on a large scale, allowing many families to buy their first dream house-- a place to call their own. Though not all prefab house production methods or types were successful or enduring, they did leave a legacy of affordable, modern housing on our cultural landscape.

This report attempted to offer a preliminary understanding of the development and history of the American prefabricated housing industry of the early- to mid-twentieth century. By no means does this represent the final word on prefabricated housing. Research and analysis of this topic for preservation planning and cultural resource management issues is just beginning. As a profession, there is much more information that will need to be gathered and analyzed in terms of identification of prefabs in order to make strong and meaningful eligibility and integrity standards.

The survey work in Marshall and McCracken counties in the Jackson Purchase Cultural Landscape region along with the archival research for this report has helped to gain a provisional understanding of the property types associated with the prefab industry. Though this study is heavily weighted toward identification of these resources, we have begun a dialogue to assess eligibility and integrity for the National Register of Historic Places. The data collected for this report has allowed for some initial assessments for evaluation and integrity considerations. It is hoped that the result of this report will open a discussion about the significance and preservation of prefabricated housing.

Suggestions for Further Research

The work on prefabricated housing is certainly not finished and in fact has really has just begun. Like many resources of the recent past, the amount of scholarly research about the topic of prefabricated housing is very low. Research about precut property types has received the most attention mainly because these resources date from an earlier period. As you may know, there has been an inherent bias in the preservation field toward the oldest resources, though the National Register asks us to examine all resources over 50 years in age.

Just as vexing, some precut manufacturers have had more attention than others, most notably Sears. It will be important to develop more information about the other companies involved in selling mail-order houses like the Aladdin Company, Gordon-Van Tine, and Lewis/Liberty. Most of these manufacturers continued to produce prefabricated housing years after Sears ceased operations in this industry. It is important to distinguish the particular manufacturer associated with a resource and note that there were many other precut manufacturers other than the Sears Company.

Even less understood are the property types associated with panelized, sectional, or preassembled production methods. Among the more nationally known companies that produced these types of prefabs like Gunnison Homes and National Homes, there are no published field guides that identify all of the different models offered. Lesser-known regional companies like Steelcraft, Peaseway, and General Plywood have had even less recognition. More research about these companies and the impact on the landscape needs to be undertaken.

In addition to the traditional way of looking at prefab housing, this project has opened a new avenue for inquiry. In Paducah, African American home owners were turning to prefab houses as an alternative to traditional housing options. Whether this phenomenon was due to the fact that skilled building craftspersons were available to assist with the customization of the prefabs or with the reality of discriminatory practices within the lending industries, it is possible that these conditions existed in other communities. A fascinating study could be undertaken that looks at African American housing within the lens of prefabricated housing to help us better understand both the factors leading to adoption of prefabs by the Black community and to the dynamics between the local housing industries, prefab manufacturers, and African American consumers. Were prefab companies marketing toward African American consumers? Or were Black consumers appropriating this suburban dream to their

own ends? Clearly, at least in the Paducah case, prefab houses were used as a way to assert independence from traditional channels that may have been oppressive. Much more research needs to be accomplished to demonstrate these hypotheses.

Obviously, research on this topic in the Jackson Purchase Cultural Landscape Region needs to continue. This report was only able to "scratch the surface" of the prefab resources extant in this region. It is presumed that prefabricated housing probably exists in some form in every county in Kentucky. Though prefabricated housing is not the sole type of domestic architecture of the twentieth century, it did have an important place within architectural history. Finding ways to make identification and evaluation of these prefab resources was a goal of this report. It is hoped that future research will add to this initial body of knowledge about prefabricated housing.

State Historic Preservation Office