

The New York State Lustron Project

FUNDED THROUGH A PRESERVE NY GRANT FROM THE PRESERVATION LEAGUE OF NY STATE & NEW YORK STATE COUNCIL ON THE ARTS

A Joint project of Historic Albany Foundation, The Preservation League of New York State and the State Office of Parks, Recreation and Historic Preservation.

What?

The NYS Lustron Project is an effort to inventory, survey, document, research and finally nominate the Lustron houses throughout the state to the National Register of Historic Places as a multiple-properties listing.

Why?

These unusual pre-fab. all-steel ranch homes were built between 1948 and 1950 to relieve the Post-war housing crisis. 103 homes were constructed in NY alone (out of approx. 2,500). Marketed as a maintenance-free home, these houses are now more than 50 years old and relatively well preserved as a group. While still requiring very little upkeep, they are at risk of being lost due to development pressures and/or insensitive remodeling. The Lustron Project's objective is to raise awareness of the architectural and historical significance of this building type, and to offer minimal protection through National Register listing.

Where?

The project is looking at all Lustron homes across the state in five specific zones: Capital Region & the Adirondacks, Western NY, Southern Tier, Central NY and Lower Hudson/NYC.

By Whom?

This project is being led by Historic Albany Foundation, since roughly a third of the state's Lustron homes are located in the Capital Region. Historic Albany Foundation together with project coordinator & consultant, Kimberly Konrad Alvarez, will be working with volunteers across the state to locate, document and research the Lustron homes. To get involved or for more information, contact Historic Albany Foundation. 518-465-0876 or <http://www.historic-albany.org/lustron.html>



The Lustron House Primer

History:

The Lustron house is a pre-fabricated, all-metal house created and developed in the post-World War II era. The design and manufacture of Lustrons aimed not just to satisfy an overwhelming and immediate need for affordable housing, but to raise the quality of living for middle-class Americans. Lustrons were ingenious not only in their materials, but also for their open floor plan, space-saving built-in cabinetry, and virtually maintenance-free and fireproof all-metal construction. Only 2,680 Lustrons were built in the United States between 1948 and 1950. Despite the high ideals and the enthusiasm generated by these buildings, national politics and intrigue abruptly terminated their production.

In 1947, Chicago industrialist and inventor Carl Strandlund, who had engineered the construction of prefabricated gas stations, obtained a multi-million-dollar Reconstruction Finance Corporation loan to manufacture steel houses with porcelain-enamel-coated panels. Strandlund was inspired by the mass production efficiency of automobile factories and strived to use similar principles in Lustron production. The steel in the houses was an original design which included both steel framing and steel walls and ceiling, while most houses were constructed with wood framing and plaster walls on wood. The design capitalized on recent advances in the use and production of steel porcelain-enamel panels. The promise of steel included sturdier construction, reduced maintenance, and ease of pre-fabrication. In addition, the houses were pitched as rodent-proof, fire-proof, lightning-proof, rust-proof and maintenance-free. The ranch-style houses built by the Lustron Corporation represented the largest group of steel porcelain-enamel homes ever constructed. Headquartered in Columbus, Ohio, the Lustron factory was housed in a former warplane plant with acres of space – said to be almost 22 football fields – large enough to contain the giant conveyor belts, welding rigs, punching/stamping machines, sheet-metal presses, frit grinders, enamel sprayers, and drying ovens needed for the production of each house's 3,000 parts.

Lustron houses are architecturally and historically significant as the only successful widespread use in history of porcelain-enamel as an interior and exterior building material for single-family homes. This use of porcelain-enameled steel marked a major milestone in 20th century attempts to use industrial materials for housing. In essence, Lustrons were the ultimate kit houses, arriving on site in specially commissioned trailers packed in reverse order so that the builder could access the components in the order needed, with the trailer serving as on-site material storage during construction. Assembly time with an experienced crew was typically about 350 hours, far less than for a conventional house. This "house of tomorrow" created a national sensation, however though short-lived. With financial backing from the Federal government, Lustrons became approved houses under the guaranteed mortgage program for returning veterans. At around \$10,000, they were priced similarly to other tract houses, although slightly more than their originally projected cost of \$7,000. Several 2- and 3-bedroom models offered variety in size and price, with the 2-bedroom Westchester Deluxe being the most popular.

The Lustron house was a one-story, gabled-roof ranch with an exterior and interior skin of enameled steel panels bolted to a structural-steel frame and a concrete slab foundation. All construction from the wall framing to the roof trusses were made of steel with porcelain-enamel steel panels hung from them. The porcelain-enameled surfaces had a glass-like and virtually maintenance-free finish. The design incorporated a 2-ft module. On the exterior the walls

consisted of two-by-two foot square panels, while on the interior the panels were two-by-eight vertical panels with four-by-four feet ceiling panels. The roof was constructed with ten steel roof trusses placed at four foot intervals. The wall-framing sections were composed of interior and exterior studs placed two feet on-center and supported by diagonal braces. All stamped steel panels, whether for the roof or walls, were fitted with a plastic gasket around the edges to seal the joints.

Decorative elements of these houses were chosen with care, given the permanent nature of the building materials. Strandlund consulted with noted color consultant, Howard Ketcham, to develop the Lustron color schemes. Ketcham specified darker colors for the roofs, while using neutral and pastel colors for the interiors. The exterior color palette of white, gray, tan, pink, blue, yellow and green was contemporary with the times. The interiors of the Lustron house at the time of their construction were considered ultra-modern, and the perception persists even today. All models included a galley kitchen with innovative appliances as an electric dishwasher and clothes washer. The living rooms and bedrooms included built-in bookshelves, vanity units, and a dinette pass-through hutch divided the kitchen and dining room. Sliding doors were used throughout the bedrooms, bathrooms, closets and kitchen cabinets to optimize usable space. Most were ornamented with modern streamlined design motifs. The main entrance door, a typical swinging door was fitted with a frosted glass insert with a striped design motif. Radiant heating was provided via a ceiling plenum system fired by oil or gas furnace unit on the deluxe models. With all these standard features, buyers were able to choose from three different house models in either a two or three bedroom floor plan. Approximately 90% of all Lustrons sold were the two-bedroom plan.

This prefabricated house involved the design and manufacture of each building element exclusively for Lustron. This concept represented an integrated but “closed system” design, so no other product would fit and as a result individual owners could not tailor the house to meet their own needs or style. Any design change would require re-tooling the factory. Ultimately, the limitations of the closed system led to problems, which were compounded by the expense and nature of steel, which required the precision fabrication capabilities of very expensive machinery. It was the initial plan of the Lustron Corp. to have a specially designed trailer fully loaded with 12½ tons of parts needed to assemble a single house roll through the factory doors every seven minutes. The complete package had 3,000 parts including clips for mounting wall decorations, the front door key and the owner’s operating manual.

To distribute the homes, the Lustron Corp. created a network of dealers across the country, each with an exclusive sales territory. Corporation documents indicate that there were 220 dealers in 34 states. Lustron began an extensive marketing campaign in early 1948 with its first model home being constructed at the corner of the Avenue of Americas & 52nd Street in New York City. Over the following year other display houses sprang up in major eastern and Midwestern cities and crowds lined up to inspect these models. Unfortunately, Lustron dealers faced several problems from the beginning including insufficient production from the plant to meet the demand and sales. Even as houses became available, dealers faced unexpected costs. The Lustron Corp. required dealers to cover the cost of each house before it left the factory floors, as well as pay for transportation to the site and the full cost of on-site assembly. In order to make such a transaction feasible, the dealer had to find customers that had complete up-front financing or the dealers carried a large portion of the costs themselves.

Despite a positive reception by the American public, Lustron was plagued by a variety of problems that contributed to its demise. First and foremost, the factory could not keep up with its original projections of 100 houses per day. The Lustron house was also designed with too many variable parts to have an efficient and productive assembly line. Because most of the parts and steel stamping press machines were designed uniquely for the Lustron, the factory was unable to produce standard parts which could have been sold for additional revenue – such as bathtubs – during idle time. These inefficiencies led to higher costs that were passed on to the consumer. Problems in the sales, finance, and construction process also persisted. Varying local building codes also proved to be a significant barrier in some areas of the country. The company helped individual dealers lobby local jurisdictions for changes in codes that restricted the construction of steel-frame housing, but it was impossible to address the problem in any kind of nationwide effort.

In 1949, the company underwent a drastic reorganization and tried developing new strategies to help ease production, financing and dealer problems. It had received more than 20,000 orders, but manufactured less than 2,500 homes. The federal Reconstruction Finance Corporation, which had backed the Lustron Corporation in the form of government loans, attempted to “help” Lustron succeed through some heavy-handed involvement in replacing the company’s top executives. The actions of new Lustron staff and the RFC’s appointed oversight committee were ethically questionable, and scandal over favoritism and influence-peddling eventually led to a reorganization of the agency itself. But as for Lustron, top RFC leaders had finally decided to cut their losses and shut the company down. They called in the loan and the company was forced to close down its factory and sell its assets in February 1950.

Architectural & Historical Significance:

Lustron homes in New York State are significant for listing on the National Register of Historic Places under NR criteria A & C for their architectural and engineering contributions. The house is closely associated with the federally subsidized efforts to alleviate the post-WWII housing shortage and thus significantly contributes to the history of housing in the United States. Lustron houses represent significant contributions to post-war development of the residential landscape funded primarily through government programs. They are part of a long history of federally subsidized housing efforts, yet are characterized by innovations that seem remarkably daring in the context of federal housing programs. Lustron houses are additionally significant for the contribution to the prefabricated housing industry and the development of manufacturing techniques which used assembly line production as influenced directly by the automobile industry. As practical, affordable housing for the average American family, Lustrons represent perhaps the most ambitious campaign in private residential construction to infuse modernity throughout everyday life in a postwar environment. The Lustron Corporation’s failure to capture a viable market is in part attributed to a nation that was ill-prepared to embrace modernism within the dearly-held and ages-old institution of the home.

Given the nature and rarity of the Lustron house as a building type, all Lustrons constructed in New York State are worthy of study, even though not all might be eligible for National Register listing. Lustron houses are unique within the context of postwar housing primarily because such a small number of them were produced and constructed. Because of the limited model availability and the relatively few customizable features, the defining characteristics of the houses are rather straight-forward.

Models:

WESTCHESTER: The *Westchester* and the *Westchester Deluxe* were the most commonly sold models. The two bedroom *Westchester* measured 31ft by 35 ft and was distinguished by a 6ft by 12ft cut out corner entry porch. Two windows on the primary façade characterize this model. The three-bedroom *Westchester* measured 31ft by 39ft and had no cut out for the porch. This model was entered through the gable-end side. Three windows on the primary façade distinguish the three-bedroom model. The *Westchester Deluxe* was an optional “upgrade” which included a built-in vanity in the bedroom, as well as a bookcase, pass-through between the kitchen and dining room and a bay window. The standard model was either 021(2-bdrm) or 031 (3-bdrm) and the deluxe models were numbers 02 and 03.

NEWPORT: Designed after the *Westchester*, the *Newport* model offered a lower-priced floor plan and was the least expensive Lustron available. However, very few *Newports* were sold. The two-bedroom model (number 032) measured 23ft by 31ft and is characterized by the two windows on the primary façade. It lacked the corner cut out characteristic of the *Westchester* model. The three-bedroom model (number 033) measured 31ft square and was also characterized by the two windows on the primary façade with no cut out for the porch.

MEADOWBROOK: The *Meadowbrook* was conceived of as a “middle-line” model and was the last one designed. It is a larger variation of the *Newport*. The two-bedroom models (022) measured 31ft by 25ft with a similar window and door arrangement as the *Newport*. The three-bedroom model (023) measured 31ft by 33ft. Very few of the *Meadowbrook* models were ever built.

ACCESSORIES: Optional accessories for any Lustron model line was either a 1½ or 2½ car garage with or without a connecting breezeway. It was available in 1949 and 1950 only. The model G-1 (1½ car) garage measured 15ft by 23ft and the G-2 (2½ car) model measured 23ft square. The breezeway would connect the house to the garage, but was sold separately. Significantly, unlike the Lustron house design, the garages were traditionally framed using balloon construction to which the porcelain-enameled panels were attached.

Model Numbers:

Westchester 2-bdrm	021
Westchester 3-bdrm	031
Westchester Deluxe 2-bdrm	02
Westchester Deluxe 3-bdrm	03
Newport 2-bdrm	032
Newport 3-bdrm	033
Meadowbrook 2-bdrm	022
Meadowbrook 3-bdrm	023
1½ car Garage	G-1
2½ car Garage	G-2
Breezeway	??

NYS Lustron Survey Inventory Form

PROPERTY INFORMATION:

Location: _____
(street address, city, zip code, county)

Ownership: _____
(name if known; address if other)

Date built/erected: _____

Original Site? Yes No If no, where from? _____

Serial Number: _____ (on seal in utility room)

Model: (see attached floor plans)

Westchester	<input type="checkbox"/> 2 bdrm	<input type="checkbox"/> 3 bdrm
Westchester Deluxe	<input type="checkbox"/> 2 bdrm	<input type="checkbox"/> 3 bdrm
Newport	<input type="checkbox"/> 2 bdrm	<input type="checkbox"/> 3 bdrm
Meadowbrook	<input type="checkbox"/> 2 bdrm	<input type="checkbox"/> 3 bdrm



Exterior Color: surf blue dove gray other: _____
 desert tan maize yellow

Orientation: ridge parallel to street ridge perpendicular to street

Exterior Integrity: Please check all that remain intact

<input type="checkbox"/> roof tiles	<input type="checkbox"/> downspout (with zigzag motif)	<input type="checkbox"/> enamel finish
<input type="checkbox"/> wall panels	<input type="checkbox"/> bay window(s)	<input type="checkbox"/> slab floor
<input type="checkbox"/> aluminum casement windows	<input type="checkbox"/> open entry porch	

Outbuildings: _____
(garage, breezeway, carport, etc.)

Alterations/Additions: Please check all that apply

<input type="checkbox"/> siding	<input type="checkbox"/> satellite dish	<input type="checkbox"/> basement
<input type="checkbox"/> new windows	<input type="checkbox"/> new roofing	<input type="checkbox"/> removal of bay
<input type="checkbox"/> additional rooms	<input type="checkbox"/> enclosed porch	<input type="checkbox"/> other: _____
<input type="checkbox"/> attached garage	<input type="checkbox"/> painted exterior	_____

Additions: Please comment on character of addition. Where located - front, side or rear? Does square footage exceed that of original Lustron house? Does massing overwhelm or obscure the original form? _____

Exterior condition: excellent good fair deteriorated

Please comment on condition of exterior building elements. i.e. rusting at wall panels, rusting at roof tiles, dented panels, inoperable windows.

Return all Survey Materials to:

The Lustron Project, c/o Kimberly Konrad Alvarez
83 Grove Avenue, Albany, NY 12208

GRAPHIC DOCUMENTATION

PHOTOGRAPHS:

Please provide black & white 35mm negative and contact sheet photographs (minimum 4"x6" print size) or digital photos having minimum resolution of 300 dpi. **Black and white film negatives and a contact sheet can be submitted in place of prints.** Please DO NOT write on the back of black & white prints, if providing. A photo log MUST be completed and submitted for each contact sheet. For digital photos, please name digital photos by location and view.

For example: <City # Street – View>
<Albany8Jermain-1>

Required Photo view:

1. Front elevation view from Street
2. $\frac{3}{4}$ view showing side and front elevations

Optional:

3. Rear view if accessible.

MAPS:

Please provide a printed or drawn locational map in the box below indicating the location of the property in relationship to streets, intersections or other widely recognized geographic features so that the property can be accurately positioned. Show a north arrow.

North

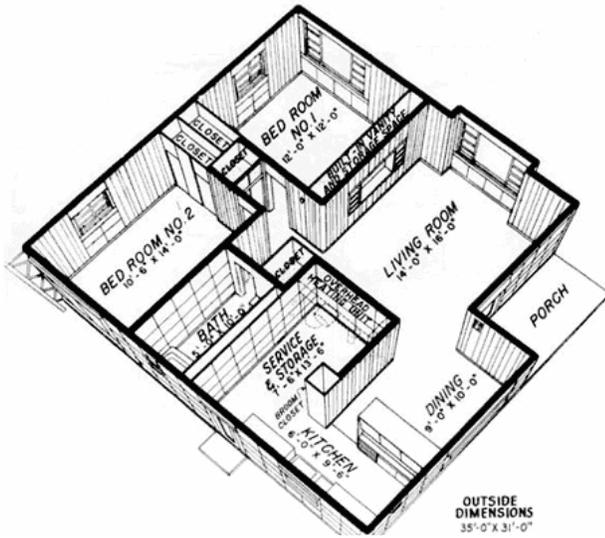


draw arrow

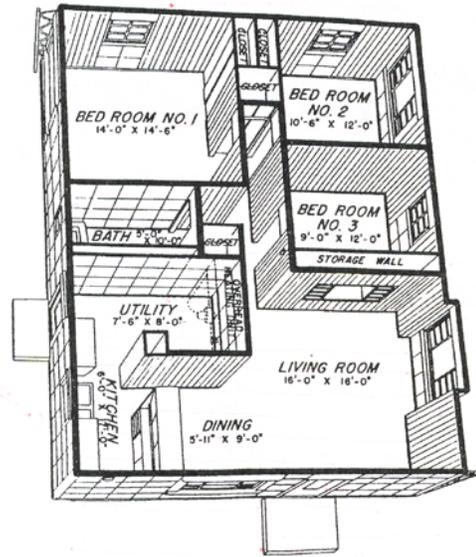
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Westchester Models

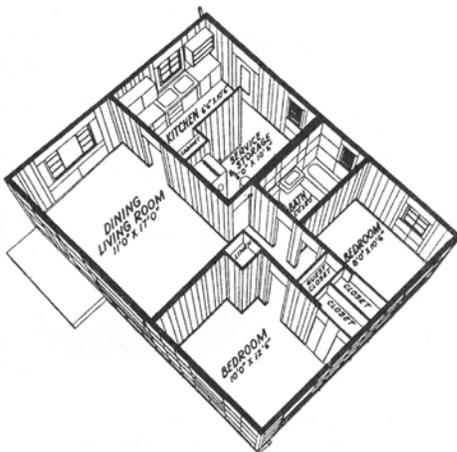


- 2 bedroom model**
- ◆ Notched porch entry
 - ◆ protruding bay window

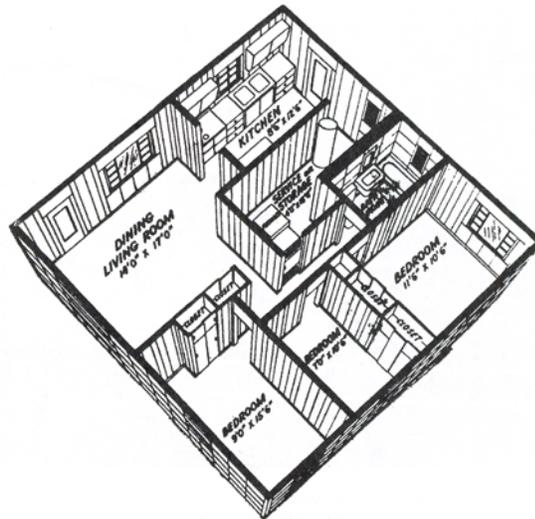


- 3 bedroom model**
- ◆ no porch entry
 - ◆ protruding bay window
 - ◆ small window between 2 picture windows

Newport Models



- 2 bedroom model**
- ◆ gable end over front door



- 3 bedroom model**
- ◆ door not on gable end

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