NATIONAL REGISTER OF HISTORIC PLACES MULTIPLE PROPERTY DOCUMENTATION FORM

This form is for use in documenting multiple property groups relating to one or several historic contexts. See instructions in "Guidelines for Completing National Register Forms" (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. For additional space use continuation sheets (Form 10-900-a). Type all etries. For additional A. Name of Multiple Property Listing

Lustron Houses in Georgia

B. Associated Historic Contexts

Prefabricated Housing Lustron Corporation 1946 - 1950 Lustron House Lustron Dealerships Lustron Planning Guides Lustron Development in Georgia 1949 - 1950

C. Form Prepared By

name/title Lisa Raflo, National Register Coordinator organization Historic Preservation Division, Georgia Department of Natural Resources street & number 500 The Healey Building, 57 Forsyth Street, NW city or town Atlanta state GA zip code 30303 telephone 404-656-2840 date 7/1/95

D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards for Planning and Evaluation.

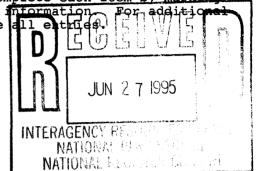
Martik Elward

Signature of certifying official

Mark R. Edwards State Historic Preservation Officer Georgia Department of Natural Resources

I, hereby, certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

Signature of the Keeper of the National Register



6/21/95 Date

Date

E. Statement of Historic Contexts

Discuss each historic context listed in Section B.

Prefabricated Housing

Although the Lustron house represented the total industrialization of the house manufacturing process, it was not a complete novelty. Prefabricated building elements had been used in house construction since the beginning of the Industrial Revolution, and factory-made metal houses dated to the early 19th century.

The first prefabricated cast-iron house was built sometime before 1830 in Staffordshire, England; by the 1840s, iron foundries in England and America were shipping metal houses in component form to the California goldfields, to pioneer settlements in Australia, and to British colonies in Africa. These metal houses provided cheap, temporary shelter.

But metal housing in the mid-19th-century did not find favor back home. Traditional houses, after all, employed sufficient factory-made components, including precut lumber and machine-made nails, to keep prices down and craftsmen happy. Factory-made houses, by contrast, were perceived as insubstantial, suitable only for specialized (and impermanent) structures like camp shelters, army barracks, and summer cottages.

A series of dramatic housing shortages in the first half of the 20th century, however, forced builders to reexamine the role of prefabrication in the production of single-family homes. In England, a post-World War I housing shortage and a steel surplus spurred development of several factory-made models. Two of the most successful--the Weir and Atholl houses, both designed in 1924--were timber-frame structures clad in steel. The Dorlonco house of the 1920s combined a steel frame with a skin of metal panels sprayed with cement. Buyers saw the houses as too experimental and expensive, and only several thousand were produced before the housing crisis was over.

In America, Buckminster Fuller attracted public attention with his first Dymaxion House (1927), a factory-made steel podlike "livable dwelling unit" that never reached full production. In Germany, the Muche-Paulick steel house (1926) featured a Bauhaus design with enameled steel wall panels and rubber gasket joints; the Hirsch house (1931) was a copper-faced structure with interior copper panels. These German prototypes remained at the testing stage, however, curtailed by the Depression of the 1930s.

After World War I, metal houses attracted publicity but few buyers and fewer industrial backers. As long as traditional houses were available and reasonably priced, prefabrication remained an emergency, stop-gap measure. By the middle of the 1930s, housing starts in America had dropped 84 percent and even the cheapest house was beyond reach of 79 percent of American families. Faced with a potential shortage of affordable housing, several American corporations built experimental prefab houses that employed steel in both the frame and the enveloping membrane.

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

In 1932, Charles Bacon Rowley and Associates of Cleveland designed the first American prototype of a house with interlocking enameled steel panels as the exterior skin. The same year, American Rolling Mills Co. produced the Armco-Ferro house, a frameless structure built of load-bearing enameled steel panels. Other corporations experimented with prefabricated steel houses in the early 1930s including General Houses, Inc. (which produced both a steel-frame house and a house with load-bearing steel panels); American Houses Inc. (a steel-frame house with an asbestos skin); and National Houses Inc. (a steel-frame house with steel panels). Each company built a few hundred houses.

More than a dozen firms exhibited prefabricated steel houses at the 1933 Century of Progress Exposition in Chicago. By 1935, twenty-one of the nation's thirty-three prefabricated housing companies used steel as a major component in their products. But technical problems, including insulation, condensation, and corrosion, hindered the experiments. Moreover, mass production required major investment in equipment and materials as well as a widespread dealership network. Without sufficient capital or adequate distribution, the unit cost of each house remained too high to attract buyers. And without a proven product or market, corporate interest remained limited.

During the mid-20th-century, another housing crisis infused new life and new capital into the prefab industry. The American army needed instant shelter, and, for the first time, the United States government supported production of prefabricated housing. As many as seventy companies produced 200,000 units for the government during World War II, most financed with public funds under the Lanham Act of 1940. Among the houses were several models that used steel and took advantage of standardized parts and modular designs.

When the war ended, the civilian housing crisis exploded, exacerbated by the building hiatus of the Great Depression and the war years. The government estimated that 3 million homes were needed in 1946 and 1947 and another 12 million over the next decade. Faced with this crisis, Congress voted in 1946 to fund research and help subsidize production of prefabricated housing. The Veterans Emergency Housing Act of 1946 granted surplus war plants to prefab firms, allocated them scarce resources, and promised government loans through the Reconstruction Finance Corporation (RFC). Prefab housing became a peacetime priority.

Under the stimulus of government support, nearly three hundred firms entered the prefab housing industry in the late 1940s. Of these three were chosen to receive direct federal loans; two of these--General Panel Corporation (1942-1951) and the Lustron Corporation (1946-1950)--were subsidized to produce steel houses. General Panel, established in 1942, produced the Package House designed by German emigres Walter

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

Gropius and Konrad Wachsmann. The house used interchangeable, standardized parts that led to a variety of designs. But by 1946, despite professional acclaim and government funding, only a few Package Houses had been built. Design and production changes plagued the project. Without a return on the investment, financing dissolved and the firm was liquidated in 1951. In six years, the company built fewer than two hundred houses.

Lustron Corporation 1946 - 1950

At the close of World War II, America faced the most severe housing shortage in its history. In response, government officials, industrialists, and architects alike explored prefabrication, hoping to enlist the technology of the assembly line in the construction of single-family homes. Of 280 firms involved in the production of prefabricated houses by 1947, the Lustron Corporation, manufacturer of an all-steel house, was the most heavily capitalized and industrialized. Supported by government loans and guarantees, and praised by the architectural press, Lustron was unrivaled in scale and hailed as a critical test of the viability of the factory-made house.

Mass-produced in component form at an Ohio factory and delivered by truck to building sites, the Lustron house featured a skin of enameled steel panels over a structural steel frame. The corporation's plans were to manufacture 30,000 houses a year. But after four years and nearly \$40 million, the corporation closed its doors with fewer than 2,500 houses to its credit.

The development of the Lustron Corporation began with industrialist Carl Strandlund. Born in Sweden in 1888, Strandlund came to the United States as a child and studied engineering through a correspondence school. By the 1920s, he had embarked on a successful career in industry; business journals credit him with several innovations in agricultural machinery during his years as president of the Oliver Farm Equipment Company. By the 1930s, Strandlund was an executive with the Chicago Vitreous Enamel Product Co., which produced enameled steel panels for use in products ranging from refrigerator doors to storefronts. As vice-president of the firm, Strandlund traveled to Washington, D.C., in the summer of 1946 to request material for the production of five hundred enameled steel gas stations for Standard Oil of Indiana.

The Civilian Production Administration found little appeal in steel gas stations. Steel houses, Strandlund was told, would be viewed favorably. Chicago Vitreous agreed, and hoped the venture might recoup some of the business lost with the postwar curtailment on nonresidential building. Three months later, Strandlund returned to Washington with plans and drawings for a house built of enameled steel

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

panels to be produced by an affiliate Porcelain Products Company. The name was soon changed to Lustron Corporation, as a contraction of "luster on." Lustron was also derived from "Lusterlite," a type of frit which Chicago Vitreous manufactured and the Porcelain Products Company applied to iron.

The plans for steel houses were well received. Housing Expeditor Wilson Wyatt call the concept a "sensationally good" idea and backed Strandlund's request for government financing. Wyatt also promised the huge wartime Dodge plant in Chicago and a guarantee to cover the cost of the first 15,000 homes produced by the firm.

By 1947, Strandlund's initial \$52 million loan request had been trimmed to a more modest \$15 1/2 million; the Dodge plant had been given to Preston Tucker (for the ill-fated Tucker car); and Wyatt had resigned under the pressure of a new Republican Congress. But when the deal was closed, Lustron received a giant Curtiss-Wright aircraft plant in Columbus, Ohio, and the most massive financial commitment ever made by the federal government to a housing firm.

Strandlund's first house--a two-bedroom prototype called the "Esquire"--was produced at a plant in Cicero, Illinois, under the auspices of Chicago Vitreous and erected at Hinsdale, Illinois, in 1946. The prototype was designed by architects Roy Blass and Morris Beckman. It was the last house Strandlund built for nearly two years. The Columbus factory was slow to equip, slow to start up, and short of steel. The delays were expensive and caused Lustron to miss the peak of the housing crisis. Not until the summer of 1948 did the first enameled steel emerge from the ovens of the plant (it was converted to ashtrays bearing Strandlund's signature), and the first house was not completed until November.

In 1948, a second loan of \$10 million was granted by the RFC and in 1949, a third loan for \$7 million was awarded. Architectural journals praised the Lustron design, and the company even won concessions from the American Federation of Labor craft unions traditionally opposed to prefabricated housing. Lustron fueled enthusiasm with glossy advertisements in Life and other magazines, a series of model homes displayed in 100 eastern and midwestern cities, and even the first tentative dealer network. By fall 1948, as the first houses finally rolled from the factory, the company had 20,000 unfilled orders and closed its books for the year.

By 1949, infused with over \$37 million in government loans, Lustron houses were being produced on a regular, if still insufficient, basis, climaxing with 268 units in July. Although far short of the stated goals for the year (17,000 houses), the press proclaimed Lustron a success. It was the first real demonstration of the seductive theory

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

that houses can be turned out like automobiles according to <u>Architectural Forum</u>. The success was short-lived; Lustron never stopped losing money--up to \$1 million a month. By 1950, the corporation had declared bankruptcy, Congress had begun an investigation, and the RFC had foreclosed on its loans. Shortly before the corporation was sold at auction in June 1950, it had shipped fewer than 2,500 houses.

The failure was especially disheartening to the proponents of prefabrication. To them, Lustron had the elements for success. Unprecedented financial, physical, and technological resources enabled the corporation to achieve a scale necessary for true mass production. Lustron was "the most industrialized of the house manufacturers" of the period, and the Columbus plant was among the largest in the world, capable of producing one hundred completely factory-made houses a day. Even the plant location was ideal, close to both steel suppliers and the so-called prefab belt of the upper Midwest, where the need for and acceptance of prefabricated housing created a strong market. The failure of the venture forced the industry to reexamine every aspect of the Lustron plan.

The Columbus plant, on 107 acres of land, had 1 million square feet of floor space and 23 acres of presses, welding machines, and furnaces. Steel was delivered by rail and either cut into framing sections and welded on the assembly line or cold stamped into panels that were then enameled and fired. Custom-designed trucks traveled through the factory on a conveyor belt; as each truck moved through the factory, it was loaded with the 12 1/2 tons of parts that composed a single house. The parts were packed in a manner that enabled on-site workers to unload them in the proper sequential order. According to Lustron plans, a fully equipped trailer would roll through the factory doors every seven minutes. Each trailer was then trucked to a building location where it served as an on-site warehouse until the house was assembled. The complete package was composed of 3,000 parts including clips for mounting wall decorations, a front door key, and an owner's operating manual.

The house built from these parts represented an integrated but "closed system" of design. Each building element--down to the window frames, gutters and bathtub--was fashioned expressly for Lustron and made on the factory floor. No other products would fit, nor could individual owners tailor the house to meet their own needs. Any design change required retooling the factory and adjusting each element of the design. The limitations of the closed system were compounded by the nature of steel, which required precision fabrication on expensive machinery, none of which was easily modified.

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

Designing such a house was not, of course, a typical architectural project. In fact, Lustron "had never been architected in a real sense," according to Carl Koch, who served as design consultant to the firm in 1949 and 1950. Although Blass and Beckman worked on the original plans, a staff of stylists--many drawn from the ranks of automotive designers--was primarily responsible for the finished look of the house. One change made from the prototype was the elimination of a jog in the rear wall which allowed for more floor space.

The first Lustron houses were two-bedroom models, although by 1950 the corporation had introduced a three-bedroom design. In 1949, the company hired Carl Koch and Associates to design a luxury model with a more flexible interior plan, a fireplace, and an attached garage. Other plans called for establishing a market for used Lustron parts and creating a system of built-in furniture. The corporation hoped one day to assemble the houses at regional warehouse-assembly plants located across the county. However, these future plans remained on the drawing board. The immediate challenge was to build houses to meet existing demand--and to get those houses to building sites.

Lustron made several business decisions that more seriously undermined the firm's potential success. First, the company underestimated the time and money needed to achieve mass production; secondly, it never established the proper distribution system to handle high-volume sales. These miscalculations were critical: by the time Lustron was producing homes on a regular basis, the housing crisis had largely passed and the house was competing in a rebounded market. Moreover, because production levels remained low, the cost of each house steadily escalated. Soon, the proposed \$6,000 house was selling for \$11,000--a price greater than that of many traditional small houses. Finally, because Lustron sold houses on an individual basis through franchised dealers, the company never achieved the sales volume that characterized the large-scale housing developments of the period like those of Levitt and Sons, Inc.

Koch and others encouraged the corporation to explore the possibilities designing for planned developments, but "without notable success." Without the lure of a cheap price, the amenities of a suburban subdivision, or the pressure of a housing crisis, the house of steel panels lost out to the traditional American home of wood or brick.

Competing in the arena of traditional housing, Lustron had little chance for real success. Conservative financial institutions were leery of granting mortgages for nontraditional houses, especially before the house had arrived at the lot. Local building codes varied from city to city and, because they were based on specifications

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

rather than performance standards, often prohibited features of Lustron's innovative design. Chicago's code, for example, banned steel houses altogether; Detroit's outlawed copper wiring. Moreover, the construction industry viewed metal prefabrication as a threat to on-site craftsmen and established suppliers of building materials. As a result, Lustron found little support within the very industry on which it depended for local assembly.

For large-scale housing developers, the problems of financing, building codes, and suppliers were solved through nearly complete control of the entire real estate process. But for Lustron, these battles were fought anew with each sale. To the corporation's credit, it waged an aggressive campaign (partially successful) to amend local building codes. Eventually, the design was approved by the Federal Housing Authority (FHA), thus expediting mortgage insurance for potential clients. But in the end, it was not enough. Even if houses had been available, Lustron's piecemeal approach to sales and distribution could not guarantee the enormous sales needed to sustain mass production.

In the ensuing years, some critics viewed the failure of Lustron as conclusive proof that factory-made housing could not succeed. But the collapse of Lustron should not overshadow the firm's achievements. The popular acceptance of the design challenged the notion that American buyers would never live in factory-made houses or that prefabs could succeed only as temporary solutions in crisis situations. Nor had any venture so thoroughly applied the methods of the assembly line in the construction of houses. Lustron's limited success caused some regulatory agencies to reevaluate existing housing codes. But from its failure, the housing industry learned that a successful prefabricated housing venture depended not only on a welldesigned product but also on the effective manipulation of all facets of the American housing market.

In January 1952, the RFC dropped its suit against Carl Strandlund in return for a general release and a transfer of all his Lustron stock. The following year, Strandlund found employment as president of a steel parts manufacturer. He retired to Florida a few years later and after seventeen years moved to Minneapolis, his wife's birthplace. Strandlund died on December 24, 1974. The Columbus manufacturing plant is still extant and was until recently used by an airline company. It is currently vacant.

The Lustron House

The Lustron house was decidedly modern in appearance as well as in construction, durable and filled with middle-class amenities. The Lustron house was a one-story, gabled-roof ranch house with an

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

exterior and interior skin of enameled steel panels bolted to a structural-steel frame and a concrete slab foundation. Wall-framing sections were composed of interior and exterior studs (joined by top, bottom, and midheight stud spacer plates) placed on two-foot centers and supported by diagonal braces. The bottom plate was fastened to the concrete foundation by an anchor bolt. The exterior of the house was composed of twenty straight wall-framing sections (which included openings for doors and windows) and ten corner assemblies. Ten steel roof trusses, placed at four-foot intervals, replaced traditional rafters and joists.

Lustron's steel panels were stamped out by huge presses, dipped in pickling baskets, sprayed with enamel, and then baked in giant drying ovens. The matte-finished panels were durable, easy to maintain, strong, and came in seven pastel colors--blue, yellow, gray, tan, rose-tan, aqua, and green. Attached to the frame in the field, the panels were screwed to the studs along a grooved channel and interlocked along hidden tongue-and-groove joints; polyvinyl chloride gaskets were placed between the flush-fitting panels.

Exterior panels measured two feet square; interior panels were two feet wide, ran eight feet from floor to ceiling, and were bolted to the wall studs. Enameled ceiling panels were four feet square, and wall panels in the bath and kitchen were two feet square. The house also included prefabricated enameled steel window frames and door jambs, gable ends, gutters and soffits, and roof "shingles."

Although steel houses in the past had suffered problems with insulation, the Lustron house had several energy-efficient features. In addition to the thermal break created by the interior and exterior walls, each exterior panel was insulated on the inside surface with fiberglass batting one and one half inches thick. In addition, a full-house plenum chamber was created by attaching insulation boards to the top member of the double lower chord of the roof truss and hanging steel ceiling panels from the lower member of the bottom chord. An oil or gas forced-air furnace circulated heat through the plenum, and the ceiling panels served as a radiant heat source directing warm air to the living spaces below. The system worked well, although its efficiency was undercut by heat loss attributable to the concrete slab floor and the single glaze windows.

The basic five-room Westchester model Lustron was built on an open plan (thirty-two by thirty-six feet), measured a little over one thousand square feet on one floor (with no basement or attic), and came equipped with several convenience features geared to attract a middle-class buyer.

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

Only the bedrooms and bathroom were completely enclosed with doors; elsewhere, floor area was subdivided with prefabricated storage partitions and closets. For example, a full-height, double-sided cabinet separated the kitchen and dining room, providing ample storage for both areas and serving as a pass-through. The vanity in the bedroom was, on the reverse side, the living room bookshelf.

Twenty percent of the wall space was devoted to such built-in cabinets, dressers, and closets, manufactured as complete units and plugged into the house at the building site. Sliding, pocket doors were employed throughout the house, and the floor was covered with easy-to-maintain asphalt tiles. One other feature was unique to Lustron: a combination dishwasher/clothes-washing machine. The permanence and durability of the house were also key selling points. Walls could be hosed down with water and never required painting. In postwar America, newly conscious of comfort and convenience, the Lustron house was decidedly up-to-date.

Lustron garages and breezeways were also available and could be added to the Lustron house at any time, since the enameled panels did not fade, these additions would always match the color of the Lustron home.

Lustron Dealerships

To distribute the homes, Lustron created a network of dealers across the country, each with an exclusive sales territory. Lustron executives initially were uncertain about the number of dealers required to serve a particular area. They granted a number of exclusive franchises over large territories east of the Rockies, including the entire New York metropolitan area and the states of Connecticut, New Jersey, and Florida.

Lustron began its extensive promotional campaign in early 1948. Over the next year, display houses sprang up in major eastern and midwestern cities. Crowds lined up to inspect models in New York, Chicago, Columbus, St. Louis, Miami, Detroit, Milwaukee, and Washington, D.C. A display house in New Jersey's Palisades Amusement Park was the prize in a raffle to benefit charity.

Unfortunately, Lustron dealers were handicapped from the start. The biggest problem facing dealers was obvious: despite two years of promises and promotions, Lustron houses were simply not being built in sufficient numbers to meet demand. Dealers were forced to placate customers or lose business.

Even as houses became available, dealers faced unexpected costs. Lustron required dealers to pay for each house before it left the

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

factory doors, to pay for transportation to the site, and to cover the cost of onsite assembly. To make such a transaction feasible, the Lustron dealer either found customers with complete up-front financing or carried a portion of the costs himself. (Lustron did arrange to have a Columbus firm, Galbreath Mortgage Company, offer dealers some interim financing.)

Dealer expenses did not stop there. Because Strandlund wanted a house that was affordable for a middle-class market, the corporation set a strict upper limit on the price the dealer could charge with slight regard for local variables like the cost of transportation or of on-site labor. For dealers in some regions the profit margin dwindled to the vanishing point. Some builder-dealers sought to keep prices low through partnerships with real estate firms, or with concrete firms who would supply the foundation for the house.

On-site assembly had hidden costs as well. The Lustron Corporation boasted that the house represented a considerable labor savings over traditional house construction. For example, dealers were assured that the Lustron home could be assembled in fewer than 350 man-hours (perhaps as few as 150, according to one Lustron estimate), in contrast to the 1,600 hours required for a comparably scaled woodframe house. Unfortunately that rarely happened. So few Lustron houses were built that local dealers depended on inexperienced crews, and assembly time often exceeded 1,000 hours. In part, local laborers were unaccustomed to the precise assembly required to make the hundreds of factory-made parts fit. Lustron resolved the problem to some degree through increased factory assembly that cut down on the number of components. Even so, on-site assembly required careful work in addition to laying the concrete slab and finish floor and completing some electrical and plumbing work. Even with practice, few crews achieved the speed that Lustron envisioned.

Nonetheless, the dealership network grew. By spring 1949, shortly before its peak production, Lustron claimed 143 dealers, mostly in the East and Midwest. Because of the "heavy volume of dealership correspondence," prospective Lustron dealers were sent a general summary explaining "How Lustron Dealers Operate" and "How Lustron Dealers are Selected" (Exhibit A). A comprehensive list of all Lustron houses has not been published, but several recent surveys indicate that many of the homes stand, often in good condition.

According to a dealer who handled the Atlanta metro area franchise, Mr. William Knight, the Lustron Corporation provided dealership and builder training at its headquarters in Columbus, Ohio. Dealers attended a Sales and Management Training Clinic while building crews trained at the Lustron Service School. Mr. Knight sent five crew

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

members for training in Ohio and used the same men for erecting the houses he sold in the Atlanta area.

A sample dealer cost estimate sheet used to price a Lustron House in Atlanta, Georgia covered the cost of the Lustron house, land, freight, services, erection costs, site improvements, landscaping, and dealer's commission (Exhibit B).

A 1949 fact sheet was utilized by Lustron Dealers for background information on Lustron (Exhibit C).

Lustron Planning Guides

The "Lustron Home Planning Guide for Your Demonstration Home" was distributed to dealers to offer basic ideas on the presentation of Lustron housing in a community and to introduce prospective buyers to a "New Standard For Living" (Exhibit D). The planning guide covered site selection, site planning, interior decoration, and site plans.

The site selection chapter suggests choosing a site preferably in a residential neighborhood where the house would remain permanently and to allow for a sufficient lot size to allow for customers to walk through and around the house comfortably.

Site planning covered proper grading and drainage, and landscaping needs of the property.

Interior decoration of the Lustron house suggested a contemporary manner to complement the scale, color, form, and arrangement of the Lustron house design.

The site plan section offered existing plans of already established Lustron Demonstration Homes.

Another planning guide, "The Lustron Planning Guide," covered "basic principles to aid the dealer in the economical development of the land on which the Lustron Home is erected." Certain information in the guide was provided by the Federal Housing Administration (Exhibit E).

In the introduction section, the planning guide states, "good planning is good Lustron business...Well planned, properly improved residential neighborhoods have long been recognized as essential factors in the marketing of properties in all price ranges. Lustron Homes situated upon lots in well-planned neighborhoods will have greater marketability and stability of value. The product which you merchandize is essentially a <u>house</u>, <u>lot</u> and <u>its environment</u>--the Lustron Corporation provides the <u>house</u>--the dealer and the customer provide the <u>lot and environment</u>."

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

Chapter One of the planning guide provided dealers with information on erecting Lustron Homes on individual improved lots. Also included were eight plot plans illustrating how Lustron's "New Standard for Living" can be extended to the outdoors (Exhibit F).

Chapter Two of the guide covers information to consider for dealers developing unimproved land. Suggestions and plans are offered for building entire Lustron subdivisions.

Lustron Development in Georgia 1949 - 1950

The March 1950 Dealer's Report indicates that a total of 19 Lustron houses were shipped to Georgia. Nine houses were sent to the Albany area; seven to Atlanta; two were sent to Macon; and one was shipped to Columbus. However, the Lustron Corporation continued to ship houses through May 1950. Since ten are known to have been constructed in Atlanta, presumably the total number of Lustron homes in Georgia could have been at least twenty two.

The first Lustron House constructed in Georgia is believed to be #20 located at 1976 Northside Drive in Atlanta. The original Lustron franchise area covered Florida and Georgia, and #20 was constructed in May 1949 as the show house by the franchise company out of Miami, Florida. Rich's Department Store in Atlanta was hired to supply the interior furnishings.

Shortly thereafter, the demonstration house and an Atlanta area franchise were then offered for sale to Mr. William R. Knight, a local real estate agent and builder. He had earlier formed Jafra Inc., but reorganized his company under the new name, Jafra, Inc. of Georgia to include the Lustron franchise. Jafra covered a three-county area of Fulton, Cobb, and DeKalb Counties (Exhibit G).

During the short period of time Lustron was in existence, Mr. Knight had tentatively sold 50 homes to potential buyers. Of this number, only 10 were ever constructed in the Atlanta metro area. All of these houses are the two-bedroom Westchester model except two. One is a three-bedroom Westchester, constructed in the Perkinson Park subdivision in southwest Atlanta; the other is supposedly a Newport model located in south Atlanta (exact location unknown). All the locations of the Atlanta Lustron's are known except for two.

In Albany, the Have-a-Home held the franchise to sell Lustron homes. Have-a-Home covered the Albany/Southwest Georgia region. Of the nine shipped to the Albany area, eight Lustron houses are located in the city of Albany and one is located in Americus.

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section E - Statement of Historic Contexts (continued)

The Dixie Metal Company owned the Lustron franchise for the Macon area. Dixie Metal developed in the 1940s as a manufacturer of quonset huts and is still in operation. Of the two Lustron houses located in Macon, one remains on McKenzie Drive; a Newport, two bedroom model. The other, located on Nottingham Drive, has been altered.

The Lustron located on Pelham Drive in Columbus (near Fort Benning) was dismantled during the 1970s. A listing of building permits from November 1949 indicates, "Col. R.O. Booth to build a one-story Lustron steel residence on Lot 11, Pelham Rd.(sic), \$8,000."

Summary

Most of the Lustron houses in Georgia are the Westchester two-bedroom models. Of the Lustron's surveyed, none have Lustron model garages nor Lustron breezeway connectors.

A list of the Georgia Lustron houses with the current owner's name, address, and National Register eligibility can be found in Exhibit H.

Lustron House Characteristics - general

Design

Consulting architects Roy Blass and Morris Beckman of Wilmette, Illinois worked on the original Lustron design plans for the prototype known as "Esquire" (Exhibit I). A modification made to actual production model houses which differed from the 1946 prototype was the elimination of a jog in the rear wall which enlarged the bath and rear bedroom. Later Lustron models also had larger bedroom side facade windows.

The house was designed to be modern in appearance as well as in construction, durable and filled with middle-class amenities. The building is one-story, gabled-roof ranch type house with an exterior and interior skin of enameled steel panels bolted to a structuralsteel frame and a concrete slab foundation. The standard exterior wall panels measure 2' x 2'; standard interior wall panels measure 2' x 8' and standard ceiling panels measure 4' x 4'. All of the steel members including studs, trusses, wall frame assemblies, roof shingle panels, rain gutters, window and door frame panels, and interior partition frames and wall and ceiling panels were entirely encased in porcelain enamel, as were the sliding doors, built-in cabinets, and closets. The concrete slab floors were finished with asphalt resilient tiles. An oil or gas furnace supplied warm air to a radiant ceiling plenum system, located between the double lower chords of the roof trusses, with baffles ensuring even distribution throughout the ceiling.

There were basically seven exterior colors: tan, gray, yellow, blue, rose-tan, aqua, and green. The interior panels were white, gray, rose, yellow, blue, and tan. According to Lustron promotional materials, the interiors were finished in "rich neutral tones which blend with any furniture or decorating scheme and which never need painting." Lustron colors were selected with the help of color experts, Howard Ketchum, Inc. Only four of the exterior colors had Ketchum color names: Maize Yellow, Desert Tan, Dove Gray, and Surf Blue. The gabled roof panels simulated a tile look and were available in brown, gray, light or dark green, and dark blue.

Porcelain-enameled steel

The porcelain enamel used for the facades is a durable, easy-care material. The porcelain panels are manufactured by using a pulverized frit fused to a base surface under intense heat, about 1540 degrees fahrenheit. The frit is a finely ground mixture of inorganic minerals in proportions of about three-quarters combined feldspar, silica sand, and borax, and one-quarter clays and other inorganic materials which provide adhesion and whiteness or desired colors. The fired porcelain enamel is shiny, hard, and nonporous.

Twentieth-century developments in porcelain-enameling technology introduced spray applications of frit, continuous-flow enameling ovens, reduced-temperature firings, and balanced-tension fusion to lighter-gauge metal base materials. This technology expanded its use from earlier art forms to utilitarian, mass-manufactured products. Its application to steel panels and framing members has produced

National Register of Historic Places Continuation Sheet

Section F - Associated Property Types

construction units which are unaffected by deterioration, retains their color, and are impervious to moisture and various chemicals as long as the enamel remains intact.

Floor plans

According to Lustron promotional materials there were 8 House types: Three models with either two-bedroom or three-bedroom floor plans. The Westchester model also came in a deluxe (built-in amenities) or standard (economy) version.

Lustron Property Types

Westchester - Exhibit J

The first and most widely sold model was the Westchester. The twobedroom design measured $31' \times 35'$ on the exterior with a $6' \times 12'$ corner recess for an entrance porch (1,085 square feet).

The three-bedroom model measures $31' \times 39'$ with no corner cut-out and was entered directly from the gable end under an attached canopy (1,209 square feet).

The Westchester model with built-in amenities was later designated the Westchester Deluxe. Deluxe features include a bay window, a dining room "pass-through" counter to the kitchen, and living room book shelf/bedroom vanity. The economy version called the Westchester Standard, used the same size, but minus the built-ins and bay window.

<u>Newport</u> - Exhibit J

Introduced in 1949, the Newport is a two-bedroom model, measured 23' x 31', and contained 713 square feet. The three-bedroom model measured 31 feet square and contained 961 square feet.

Meadowbrook

The Meadowbrook is a larger variation of the Newport model. The twobedroom Meadowbrook measures $25' \times 31'$ (775 square feet) and the three-bedroom is $33' \times 31'$ (1,023 square feet).

National Register of Historic Places Continuation Sheet

Section F - Associated Property Types

Garages/Breezeway Additions

Two garage packages were also available in late 1949-50. Unlike the houses, the garage packages did not include steel framing; the enameled panels were fastened to light wood framing obtained locally. At least one breezeway package was offered, to connect the house and garage or to install without a garage.

Garage Model G-1 is a one-and-one-half car size, measuring 15' x 23'.

Model G-2 is the two-and-one-half car model and measures 23' square.

Lustron promotional material touted that garages were easy add-ons for Lustron property owners to consider since the enamel panel colors would not change with age or weathering, the garage panels would always match perfectly even years after the original house was constructed.

Statement of Significance

The Lustron house is significant in architecture and engineering for its associations with important developments in post-World War II prefabricated housing; as an excellent example of an innovative and unusual type of prefabrication employing assembly line production of all-steel building components including porcelain enamel steel panels; and for its modern gabled-roof ranch design. The Lustron house was a technologically advanced prefabricated answer to the housing shortage.

Lustron properties are significant under architecture and engineering if they are an example of one of the aforementioned models of Lustron houses and if they have retained historic integrity. Lustron houses meet Criterion A as an example of the type of innovative use of modern material technology and marketing techniques that were used to meet the demands of a severe housing shortage following World War II. Lustron houses meet Criterion C as examples of the type of creative house design and construction used for prefabricated housing during the late 1940s.

Lustron houses meet Criterion Exception G since there is sufficient research and information available on Lustron houses and the Lustron Corporation as well as on prefabricated housing, to objectively evaluate these properties on a national, state, and local level. They have been recognized as a significant aspect of post-WWII housing in America.

National Register of Historic Places Continuation Sheet

Section F - Associated Property Types

Property Type Registration Requirements

To meet the property type registration requirements, the house must be a one-story, ranch type Lustron with exterior two-foot square, porcelain-enameled steel panels and porcelain-enameled, tile-like roof shingles. The interior must retain a significant portion of enameled steel ceiling and wall panels. The house must be manufactured by the Lustron Corporation and maintain a high degree of integrity by retaining most of its metal construction, an intact floor plan, aluminum casement windows, enameled steel, tile-like roof shingles and a concrete slab foundation.

Additions made to Lustron houses on the rear facade do not represent loss of integrity as long as the square footage of the addition does not exceed that of the Lustron house or its massing does not overwhelm or obscure the original form.

Alterations to a Lustron house such as vinyl siding, artificial siding, major front facade changes (i.e. removing bay window), or doubling the size of a Lustron house with an addition, would result in its loss of historic integrity and therefore be considered not eligible for listing in the National Register of Historic Places.

G. Geographical Data

The State of Georgia (see attached list of Lustron house locations and current property owners Exhibit H).

H. Summary of Identification and Evaluation Methods

Discuss the methods used in developing the multiple property listing.

This multiple property nomination is largely based on the information gathered from sources listed under <u>Major Bibliographic References</u>, from site visits made to the various Georgia Lustron houses, and from interviews of current and former Georgia Lustron owners. The text used for the associated historic context <u>Development of Lustron</u> <u>Corporation 1946 - 1950</u> is from the article by Tom Wolfe and Leonard Garfield, "A New Standard for Living: The Lustron House, 1946-50." <u>Perspectives in Vernacular Architecture</u>, 1989, The Curators of University of Missouri Press, Columbia, Missouri.

I. Major Bibliographic References

- "Bill Knight Heads Jafra, Handling Lustron Homes." <u>The Atlanta</u> <u>Journal</u>, June 5, 1949, pg. 15.
- Coambs Lustron House, Chesterton, Indiana. <u>National Register of</u> <u>Historic Places Registration Form</u>, Sept. 17, 1992.
- Interviews:
 - Tom Fetters, Author, 1/5/95, 1/27/95, 2/7/95, 3/27/95. William R. Knight, Owner, 9/27/93, 4/13/94, 2/10/95. Ray Luce, Ohio State Historic Preservation Officer, 4/11/95. Robert Mitchell, AIA, 10/29/93.
- Keister, Kim. "Showing Its Metal." <u>Historic Preservation</u>. The Magazine of the National Trust for Historic Preservation. January-February 1995.
- Mitchell, Robert A., AIA. "What Ever Happened to Lustron Homes?" <u>APT</u> <u>Bulletin</u>, 1991, Vol. 23, No. 2. pg. 44.
- Niedermeier, Lynn Eleanor. "A House Like a Ford": The Prefabricated Porcelain-steel Lustron Home, 1946-1950. Graduate Thesis, Middle Tennessee State University. 1992.
- Wolfe, Tom and Garfield, Leonard, "A New Standard for Living: The Lustron House, 1946-50," <u>Perspectives in Vernacular</u> <u>Architecture</u>, 1989, The Curators of University of Missouri Press, Columbia, Missouri.

Primary location of additional documentation:

- (x) State historic preservation office
- () Other State agency
- () Federal agency
- () Local government
- () University
- () Other, Specify repository:

Exhibit A (pg. 1 of 2)

INFORMATION ABOUT LUSTRON DEALERSHIPS

Thank you for your inquiry about a Lustron dealership. While we would much prefer to send you a personal reply, the heavy volume of dealership correspondence forces us to answer your questions by furnishing you with a general summary on how Lustron dealers are selected and how they function.

I. How Lustron Dealers Operate -

Lustron dealers are franchised on a non-exclusive basis to operate in their community. Generally, a dealership will be limited to a city and its immediate trading area. The Lustron dealer erects, sells and services Lustron homes and helps arrange mortgage financing for home purchasers.

He is entirely responsible for putting in foundations and erecting the house packages which are purchased from the Lustron Corporation. To hold down costs and to ensure quality, Lustron dealers are not permitted to subcontract this work.

In a good many instances the dealer may wish to incorporate for the purpose of bringing into the corporate structure an established home building or construction organization to satisfactorily meet these requirements.

No Lustron homes are sold to middlemen for resale. The Lustron dealer sells directly to the owner-occupant. We feel that the best way to build customer good will is to give the Lustron home purchaser the best possible buy in housing today; that means eliminating intermediaries who would take extra profits and raise the price to consumers.

II. How Lustron Dealers are Selected.

Lustron dealers are enfranchised dependent upon their ability to fully realize the sales potential in the territory requested. The principal factors involved in judging the qualifications of an applicant are:

- A. Current experience as a builder and contractor.
- B. Record of past business success.
- C. Ample financial backing.
- D. Good local reputation.
- E. An organization composed of personnel experienced in construction work, real estate sales and financing.

III. How Lustron Dealerships are Set Up.

As soon as a franchise is granted, a dealer will make arrangements for several of his construction personnel to attend the Lustron Service School. At the school, the basic essentials of Lustron home erection are taught. In addition to this training of his crew, the dealer receives aid from a Lustron service representative in the erection of his demonstration home.

A sales representative coordinates erection of the demonstration home with plans for its public showing. The Lustron Sales Promotion department assists the dealer planning publicity, advertising, furnishing and landscaping.

IV. Lustron Plans

The schedule for Lustron homes calls for production increases to a high level and very rapidly. Nevertheless, it must be recognized that this is a huge and entirely new business which must be organized systematically. It will take some time to develop smoothly operating dealerships everywhere.

Therefore, a dealer applicant should continue in his present business to provide income and employment for his personnel until the dealership becomes fully operative.

V. Conclusion:

The men we seek for Lustron dealers are those who desire to establish a permanent business - who have the long-run pull definitely in mind and can organize for it, men who can see the importance of giving good value now to build good will for the future. We are not interested in the kind of business-men who continually shift from one enterprise to another on a speculative basis.

If after considering this information, you believe you can qualify as a Lustron dealer, you are invited to submit the enclosed Appli-. cation for Dealership blank, a financial statement and a Personal Data Supplement for each principal in your organization. Additional pertinent data may be attached. Your application will receive our careful and thorough investigation - which may take sixty days or longer.

Whether you apply or not, we want you to know that your interest in the Lustron home is appreciated, and we hope that you will continue to follow our progress in presenting to America a new standard for living.

Exhibit B

(SUGGESTED FORM)

LUSTRON DEALERS' COST ESTIMATE SHEET

Cost of Complete Lustron Package	\$_6000.00
Land Cost	2200.00
Freight	195.00
Services	
Sewer Extension	145.00
Water Extension	60.00
Gas Extension	75.00
Electric Extension	135.00
Septic Tank Installation	
Oil Tank Installation	95-00
Erection Costs	8905.00
Site Improvements	
Foundation and Floor Slab	900.00
Sidewalk ft. wide	90.00
Curb and Gutter ft.	
Walks ft.	75.00
Drive ft.	375.00
Fill yds.	100.00
Excess Dirt Removal yds.	
Tree, etc. Removal	90.00
Grading	40-00
Landscaping	
Plant Material and Labor	235.00
Seeding or Sodding	40.00
Dealer's Commission	1000.00

Total Sales Price

\$ 11,925.00

Exhibit C (pg. 1 of 6)

FACT SHEET

Lustron Corporation 4200 East Fifth Avenue Columbus 16, Ohio

The House

Precision built Lustron Homes are manufactured by straight line production methods. This newest application of lifetime porcelain finish on steel marks a radical departure from conventional building methods. Standard 2' x 2' exterior wall panels, standard 2' x 8' interior wall panels, standard 4' x 4' ceiling panels and shaped roof panels cover the interior and exterior of the home. All are designed as basic porcelain panels, coated on both sides to insure permanence.

<u>CONSTRUCTION</u> The skeleton of the house is made of steel framing, factory-welded into wall sections and roof trusses. Porcelain finish steel panels cover the roof, exterior and interior walls. Interlocking with each other, they are attached to the frame with concealed screws. Compressed between the panels is a permanent plastic sealing strip which forms a gasket and assures an air tight moisture resistant enclosure. This all steel construction provides great durability and strength.

DESIGN A choice of several colors in carefully blended combinations is available for the exterior. Interiors are finished in rich neutral tones which blend with any furniture or decorating scheme and which hever need painting. Lustron colors have been carefully designed with the help of Howard Ketchum, Inc., one of the nation's foremost color experts. General lines follow the one-story modified ranch style architecture which has proved so popular in the past few years.

ROOF Specially shaped roof panels are designed both for strength and rugged appearance. The panels are finished on both sides with lifetime porcelain on steel. They are fastened to the steel roof trusses with concealed screws, giving the house a permanent and unusually attractive roof.

<u>PERMANENCE</u> The nature of lifetime porcelain finish is such that a Lustron Home never needs re-roofing or painting. The home is built of consistently high quality materials. Fire-safe, Lustron Homes receive the same low insurance rates as solid masonry construction. Rat-proof, decay-proof, termite and rodent-proof. The Lustron finish will not fade, crack or peel. Damage resulting from abuse can be easily repaired. All-aluminum sash windows open out, are easily operated from inside by crank type handles. Screens are included.

FOUNDATION The house is erected on a concrete slab. No basement, no expensive excavation necessary. Foundation is insulated with the best known material for foundation insulation.

<u>INSULATION</u> Walls and ceiling are fully insulated with high quality, fire resistant permanent material, making the home wonderfully cool in summer and snug and warm in winter. Special attention nes been paid to cross ventilation of the bedrooms by the arrangement of the windows.

MODELS At present the Lustron Home is available in two Westchester DeLuxe Models. One is a two bedroom home of 1093 square feet, including a porch. The other is a three bedroom plan containing 1217 square feet. Both are equipped with many deluxe features including built-in bookshelves, bedroom vanity-storagewall, eleven closets and overhead storage cabinets, oil or gas radiant panel heating, dishwasher-clotheswasher combination, china cabinet passthrough, large picture windows, large service and storage area.

<u>GARAGES</u> The same exterior wall and roof panels which are used in the Lustron Home are sold to Lustron dealers in packages for one-and two-car garages to match the houses. These are fastened to wood framing supplied by the dealers. Breezeways, patios, carports, screened porches can be added by the dealer, at the customer's option, using Lustron panels in combination with conventional materials to give unlimited variety to Lustron Homes.

<u>PRICE</u> Lustron cannot quote a delivered and erected price for any home. To the factory cost of the house and transportation charges, the local builderdealer adds the cost of erection labor, which amounts to 300 to 400 man hours at prevailing carpenter rates. Plumbing requires 40 hours, electrical work 25 hours, asphalt tile installation 12 to 16 hours. Site preparation, installation of electric, water, gas (or oil tank), and sewage lines is additional, as is the design and preparation of walks, driveways, landscaping and the addition of garages, breezeways and other features at the customer's option. Many of these costs vary according to size and condition of the lot.

The Plant

THE LUSTRON CORPORATION plant is leased from the War Assets Administration at \$35,000 per month. It is located directly east of Columbus, Ohio, near the Pennsylvania and B & O railroads. It is conveniently accessible to US highways 40, 62, and 33, a stone's throw from the Columbus airport.

In area it comprises 1,100,000 square feet of floor space in two huge buildings having floor space under roof equivalent to 22 football fields. Within the plant there has been installed \$15,000,000 worth of furnaces, presses, dies, welding machines and other tools necessary to turn out homes on full three-shift operation at the rate of 100 per day. Best production record to late is 27 in a single eight-hour shift. Forty-two houses have been shipped in one day.

Engineering of the plant has placed fabricating and processing equipment for manufacture of panels, cabinets, and sanitary ware in one building. The second building provides fabrication and assembly of structural members along with the integration of manufactured pieces with purchased parts. Huge truck-trailers serve as the assembly line package. These trailers are loaded inversely to the order in which parts are needed during house erection, so that they serve as warehouses on the construction site.

Production is controlled by orders on hand, with virtually no warehouse space for completed houses. Parts are fabricated on 163 presses, ranging from 30 to 1800 ton capacity. The largest of these presses can draw a bathtub in a single operation. Three huge automatic presses can turn out 2' x 2' panels in steady stream. The manufacturing processes are sustained and production flow maintained by more than 8 miles of constantly moving conveyors.

The largest porcelain enameling setup in the world is housed in one building where eleven specially designed furnaces with their accessory equipment might be considered as eleven enameling plants. Two of the eleven furnaces, electric ones, have the largest rated capacity of any in the world. The other nine furnaces are much larger than those commonly employed in the porcelain industry. Welding is an important process in the manufacture of the Lustron Home. Here too, the Lustron plant is equipped to do projection and spot welding. One of the most complicated industrial welding applications is the automatic machine used in the assembly of roof trusses, in which 31 Welds are completed in a 40-second cycle.

One important Lustron development is the use of cold rolled automobile body sheet steel of standard gauges. Ceramic engineers developed the process and materials to enable firing the porcelain at much lower temperatures than other plants. By permitting lower firing temperatures, this method cuts fuel costs, decreases warpage, and reduces tooling materially. Also of a revolutionary nature, was the use of cover coat porcelain enamel directly to the steel with the elimination of the conventional base or ground coat.

All labor within the plant is A.F. of L., workers being members of the carpenters, plumbers, or electricians unions.

Transportation

Lustron homes are carried from the Columbus, Ohio plant on specially built trailers to the site where they are to be erected. The country has been divided into zones, to permit uniform delivery prices at points equidistant from the factory.

Trailers used in the movement of the houses from the factory to the site are loaded on the plant assembly line, in proper rotation to permit rapid unloading and erection in the field. When it is necessary to ship homes by rail, the trailer is placed on a flat car, or specially crated to comply with railroad classifications. Tests are being conducted for export shipments, both by special crating and by shipping the loaded trailer.

The overall length of the Lustron truck and trailer is 45 feet. Trailer length is 32'6", width 8' and overall height 12'3".

Trailers are designed to accommodate the parts of the house without crating. Compartments and racks are designed to prevent damage to the materials while in transit, as well as during loading and unloading operations.

Tractors and trailers are leased by Lustron. Combination trailer-tractors are brightly colored in blue and yellow to permit ready visibility and an appearance of neatness and cleanliness which is evident in the house. On December 31, 1949, there were 800 of these specially designed trailers and 200 tractors available to Lustron.

Dealers

Builder-dealers are franchised to erect houses within a given geographical area. Prerequisite to receiving a franchise is experience in the construction and sales field, a good credit record, sufficient working capital and willingness to use AFL union labor.

At the end of 1949, Lustron has 234 dealers located in 35 states, and one in Venezuela. The dealer organization is growing constantly.

Dealers are responsible for initiating their own sales, and for constructing the homes. Any variations from the standard plans are the responsibility of the dealers.

Lustron conducts a Sales and Management Training Clinic at the factory to train dealers in the successful operation of a dealership.

Erection

A standard erection procedure has been prescribed by the Service Department of the Lustron Corporation, which is responsible for instruction of dealer erection crews, quality control of erection in the field, and replacement of parts damaged in shipment.

When the first Lustron homes were erected, workmen required as many as 1500 hours to piece the buildings together in the field. Engineering developments and improved erection methods have cut this time to an average of 350 hours---with some houses being put up in as few as 250 hours. Normal building time is approximately two weeks. AF of L carpenters, electricians and plumbers are used for all field construction labor.

Lustron maintains an Erection Training School at the factory to train dealers' supervisors and foremen in efficient erection methods.

Home Finance

Lustron homes are being financed through all sources of mortgage financing. Loans have been made by many of the largest insurance companies through their branch offices throughout the country. Savings and loan associations have been prominent in Lustron customer financing, making a large number of loans without government guarantee.

Almost all Federal Housing Administration offices east of the Rocky Mountains have by now processed mortgage insurance applications on Lustron homes. Field offices of the Veterans Administration have guaranteed second mortgage loans to veterans in many localities thereby enabling them to buy Lustron homes with little or no down payments. The amounts which the lending institutions, FHA and VA, are willing to loan or guarantee are being gradually raised as the Lustron home demonstrates its potentialities for market acceptability and owner satisfaction.

Lustron Corporation and the Galbreath Mortgage Company, of Columbus, Ohio, have developed a plan for interim financing of dealers which has been acclaimed by everyone in the home manufacturing industry as a distinct contribution to the solution of one of the major problems of the industry. The plan has been made available to one other company and the Galbreath Mortgage Company has received overtures for its extension to many others. Under the plan, Lustron dealers may receive a loan for erection costs plus payment for the Lustron house package as it leaves the gate on the Lustron special trailer.

Shipments and Inventory

Shipments of Lustron Homes have diminished completely the inventory of homes built up during the production testing of the factory. At the present time, only a minimum inventory of ten or fifteen houses is maintained to provide for color and other options to meet the needs of customers and zoning regulations.

Shipments by states to and including December 31, 1949, have been as follows:

Alabama Arkansas Connecticut	15 12 42	New Jersey New Mexico New York	12 7 103
District of Columbia	20	North Carolina	39
Florida	20 16	North Dakota	12
Georgia	18	Ohio	275
Illinois	307	Oklahoma	8
Indi ana	142	Pennsylvania	116
Iowa	112	South Carolina	2
Kansas	70	South Dakota	27
Kentucky	28	Tennessee	29
Louisiana	22	Texas	13
Maryland	7	Virginia	81
Massachusetts	22	West Virginia	64
Michigan	48	Wisconsin	129
Minnesota	29	Export	5
Mississippi	5	Test & Demonstration	11
Missouri	97		
Nebraska	25	TOTAL SHIPMENTS	1970

Public Acceptance

A total of 404,061 letters and written inquiries have been received by Lustron Corporation since April 1948, when its national advertising began. In addition, it is estimated that more than two million people have visited and inspected demonstration Lustron Homes in communities throughout the country east of the Rocky Mountains.

Independent surveys of Lustron homeowners show almost universal satisfaction with the Lustron Home by those who have invested their money and who are in the best position to judge. In localities where a number of Lustron Homes have been erected, dealers report no difficulty securing additional sales. Public acceptance or customer orders have not been serious problems in most localities.

Sales have held up surprisingly well in November and December, and prospects are good for January and February, in spite of winter weather.

As dealers become better organized to handle the widespread demand for Lustron Homes, and as financing arrangements are being simplified, the sales prospects for the months ahead look very good.

Current Financial Summary.

Lustron has not borrowed any money from RFC since September 13, 1949. At the present time, Lustron has liquid assets in the form of cash and receivables of over two and a half million dollars. The only money needed now is to provide for additional working capital on a stepped up program beginning in Marchdictated by an improvement in sales.

Expenses of creating the manufacturing facilities were at a peak in June 1949. Losses as of November have been reduced by almost one million dollars per month. The loss in November was \$628,431.83, which included \$158,734.56 for interest and rent paid back to the government, \$107,370.93 charged off for depreciation and amortization of equipment already paid for, and \$159,180.54 charged off for unused mileage which is subject to recovery when volume increases, leaving a net loss excluding these fixed charges of \$203,145.80 for November.

The last loans from RFC were granted on a short term basis with the understanding that re-payments would be scheduled by RFC to meet Lustron's ability to pay.

December 31, 1949

Lustron Houses in Georgia MPN

Exhibit D



PLANNING GUIDE

FOR YOUR DEMONSTRATION HOME



SITE SELECTION

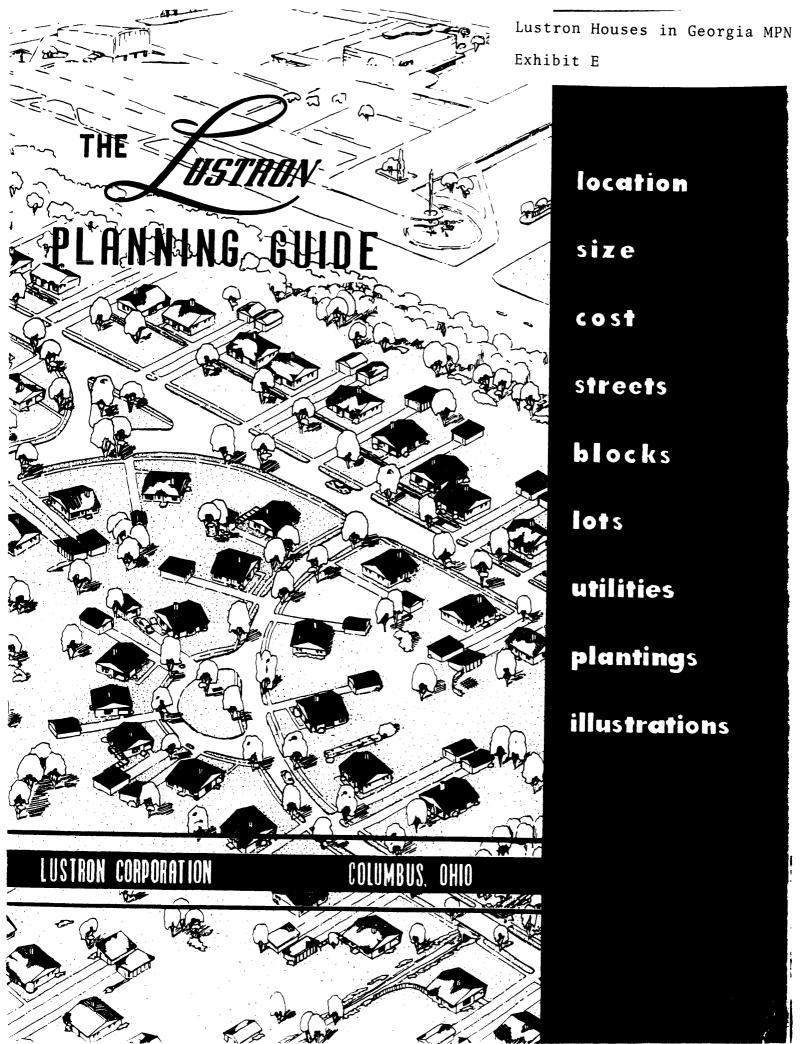
SITE PLANNING

INTERIOR DECORATION

SITE PLANS

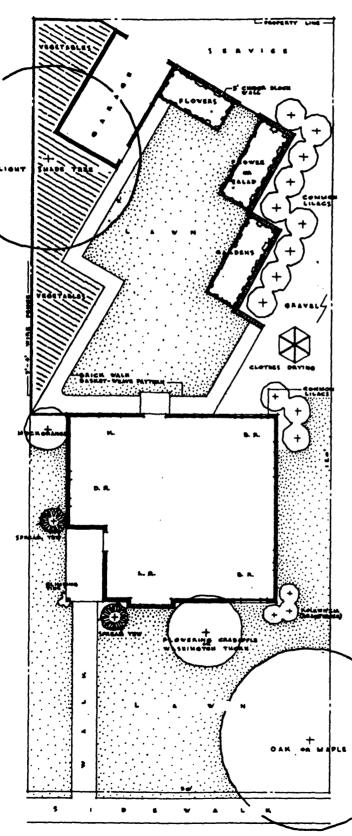
LUSTRON CORPORATION

COLUMBUS, OHIO



Lustron Houses in Georgia MPN

Exhibit F (pg. 1 of 8)



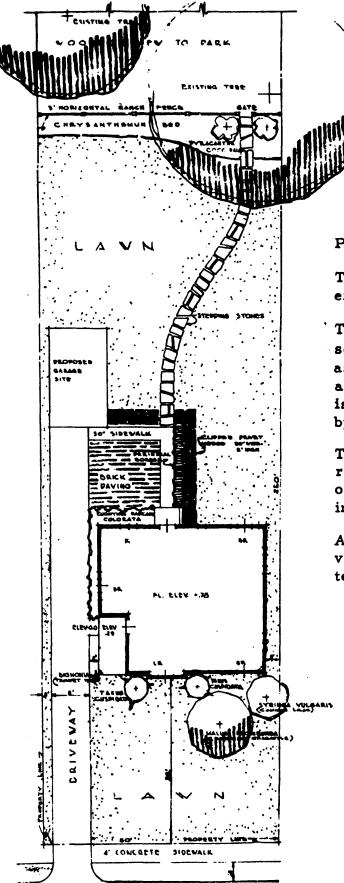
Plot Plan No. 1

This plan is suggested for an interior lot, 50×120 feet.

The garage is located at an angle to provide easy access from the alley.

To make the back yard seem deeper, a diagonal arrangement is used for the living lawn and flower or vegetable plots.

The clothes lines are conveniently located near the service entrance and are reached by a brick walk.

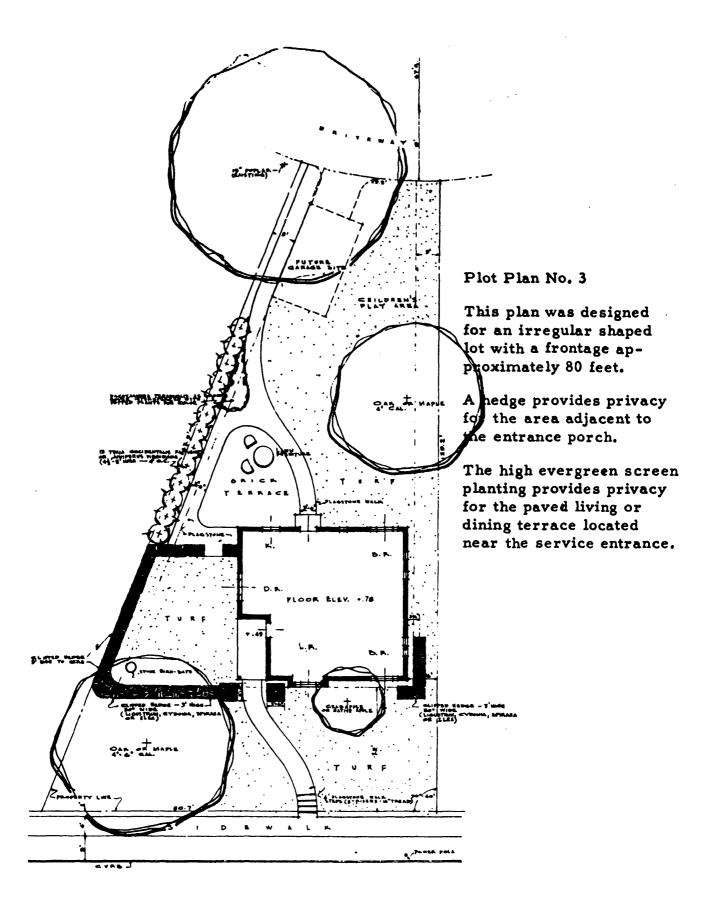


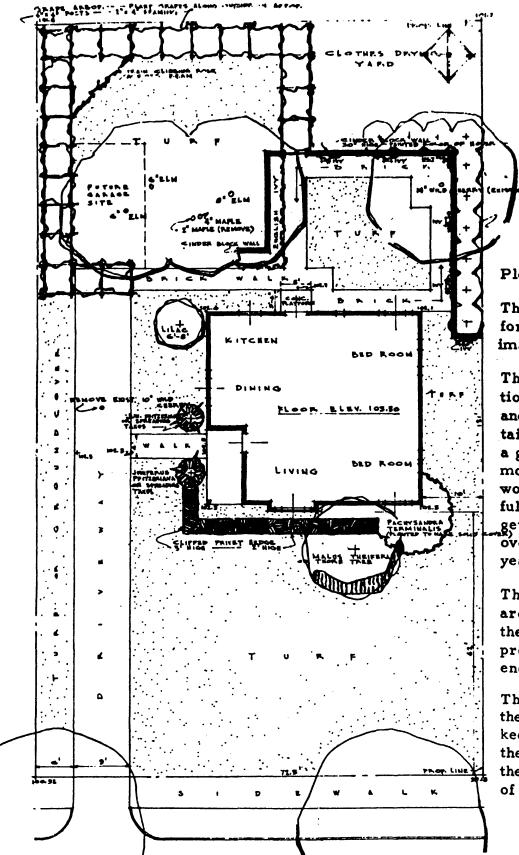
This plan was designed for an extremely deep lot 50 x 250 feet.

The terrace is located near the service entrance and can be used as a play area for children or as a living-dining terrace. It is separated from the lawn area by a hedge.

The extreme rear of the lot is reserved as a copse woodland in order to reduce the maintenance in this expensively deep lot

Against the woods, a flower or vegetable border is suggested to terminate the lawn area.



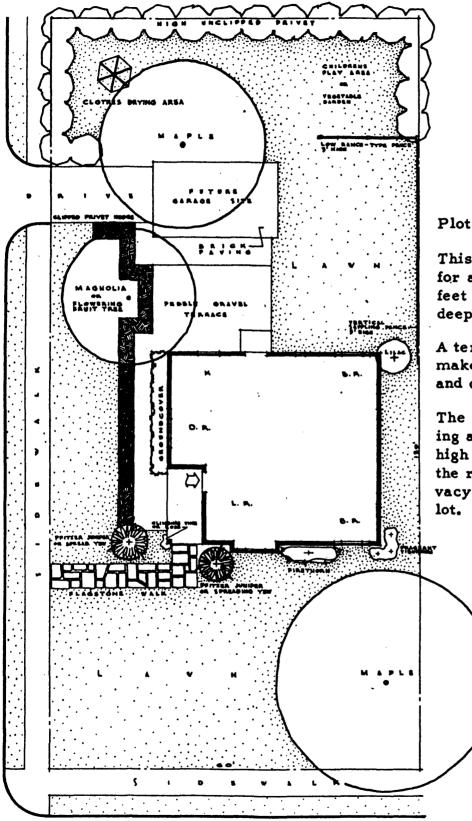


This plan was designed for a larger lot approximately 72 x 121 feet.

This is a fairly pretentious landscape plan and will eventually entail the expenditure of a goodly amount of money and time. The work should be carefully planned and a budget worked out to extend over a period of several years.

The arbor separates the areas and together with the high screen planting provides privacy for the enclosed area.

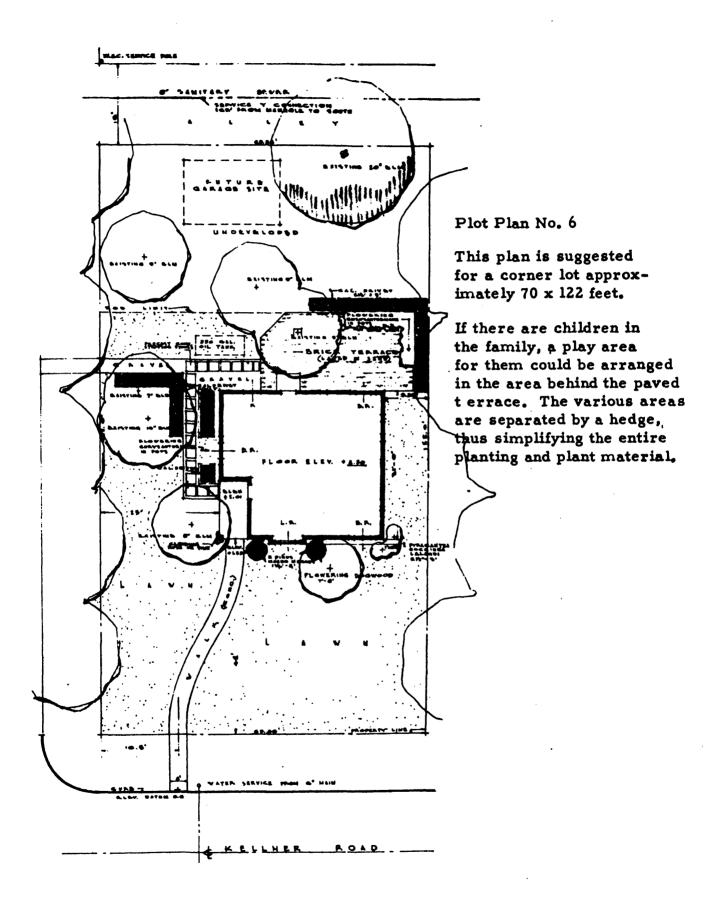
The use of the hedge at the front of the house keeps the planting in the modern character of the architectural style of the house.

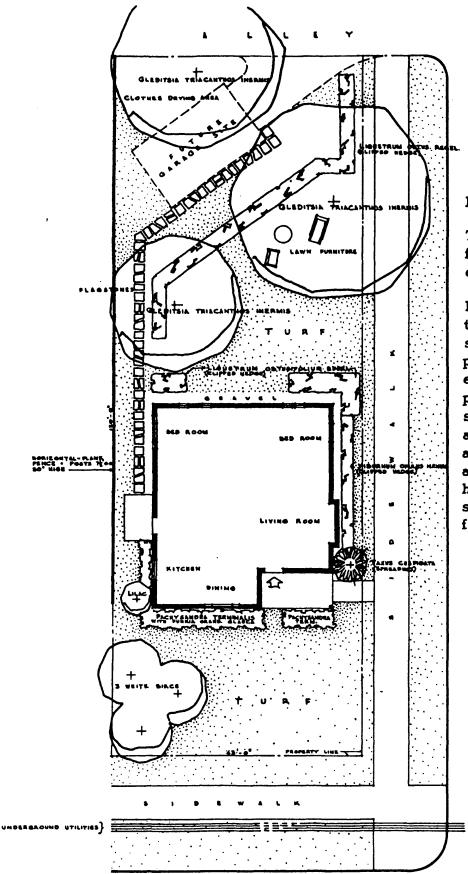


This plan is suggested for a corner lot, 60 feet wide and 120 feet deep.

A terrace at the rear makes an outdoor living and dining area.

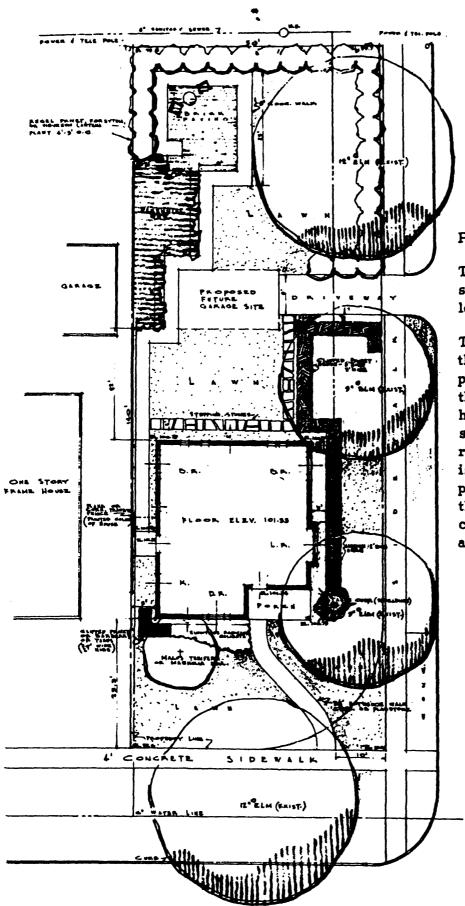
The fence and the planting at the sides and the high screen planting at the rear provides privacy even on this corner lot.





This plan is suggested for an extremely narrow corner lot, 43 x 120 feet.

If the building restrictions pertaining to the side yard limit lines will permit the house to be erected on the lot, this plan is particularly pleasant. The garage located at the rear of the lot, and at an angle, provides easy access from the alley. The hedge repeating the angle screens the service area from the living lawn.



This plan is another suggestion for a corner lot 50 x 140 feet.

The existing trees on the right side of the property determined the placement of the house. The hedge and screen planting at the rear of the property is suggested to provide privacy. The lawn near the rear of the house could be used as a play area for children. ics of the various positions range from \$2,724 to \$4,479.60 annually. The maximum bacis salaries are from \$3,175.44 to \$5,232.

Bill Knight Heads Jafra, Hàndling Lustron Homes

W. R. (Bill) Knight, well known in realty and building circles here, is now president of Jafra, Inc.



of Georgia.

The firm, which handles the much-publicized Lustron homes. is a reorganization of the company formerly known as Jafra, Inc. Mr. Knight,

in taking over his new position, stated that the firm is

owned and di-W. R. KNIGHT rected by "home folks." Mr. Knight is builder-dealer, for this area.

Lustron, the all-steel, porcelain enameled home which has been featured in Life, Architectural Forum and other national magazines, is a new and revolutionary approach to the housing problem.

Mr. Knight said that 18 of these homes are already contracted for in the Atlanta area, with 10 in various stages of construction. He said that the 1,085-square-foot home has been approved for full FHA loans, as well as conventional loans. Being of all-metal construction, they are said to be completely rust proof and termite Even the bathtub and proof. other plumbing fixtures are a part of the assembled units.

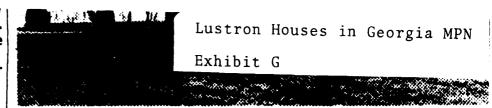
Mr. Knight came to Atlanta some years ago from South Carolina, where he was engaged in the construction business. Before becoming connected with Lustron, he was in the real estate business here.

For Fire Only

2

5

Galvanized steel fire buckets are designed with convex or conical shaped bottoms to prevent them from being used as general



FINE HOME-3030 Nancy Creek rd., N. W .- This tractive residence has been bought for a home by N Helen McLain Donehoo. Negotiations were handled Gordon McNabb of McNabb Realty Co., in Buckhead



RANCH STYLE WHITE BRICK-2911 Scott blvd., catur—This pretty residence has been bought for a h by Mr. and Mrs. M. L. Frey from O. A. Sanford. sale was handled by Paula Winter of Simms-Dobbs realtors.

CLASSIFIED DISPLTY

Notice to Property Owners ATLANTA REAL ESTATE OWNERS ASSN Will Meet June 8, 1949, 8 o'Clock P.

At Ansley Hotel Civic Room

All members and their friends are requested to be present.

QLASSIFIED DISPLTY

WE SELL MORE HOMES THAN ANY OTHER FIRM IN GREATER ATLANTA

Roy D. Warren Co., Inc Broker SALES-LOANS-INSURANCE

Georgia Lustron Locations 5/95

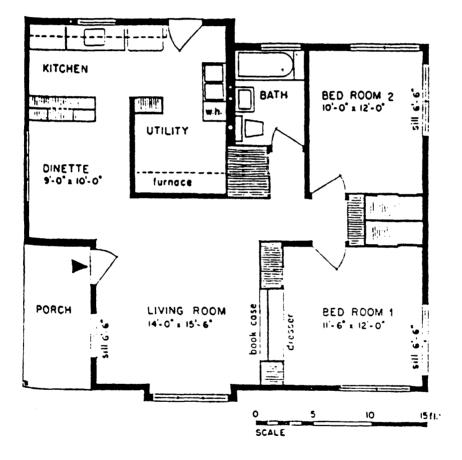
Current Owner and/or Address	Туре		NR Eligible
Atlanta Area			
William Knight 1976 Northside Dr. Atlanta, GA 30318	Westchester 2 bedroom I.D. #20	(green)	yes
Roberta Dismukes 513 Drexel Ave. Decatur, GA 30030	Westchester 2 bedroom	(yellow)	yes
Jewell McLaughlin 2081 Sylvania Dr. Decatur, GA 30033	Westchester 2 bedroom	(gray)	yes
2071 Sylvania Dr. Decatur, GA 30033	Westchester 2 bedroom	(yellow)	yes
Rae Epting 1692 Brewer Blvd. Atlanta, GA 30310	Westchester 3 bedroom I.D. # 2201	(tan)	yes
Helen Adams 832 Burchill St. Atlanta, GA 30310	Westchester 2 bedroom	(gray)	yes
721 King Rd. Stone Mountain, GA	Westchester 2 bedroom		No (vinyl siding)
former Spurlock House 735 Longwood Dr. Atlanta, GA 30318	Westchester 2 bedroom		demolished

Macon

Cecil/Hazel Brickle 3498 McKenzie Dr. Macon, GA 31204	Newport (gray) 2 bedroom	yes
Nottingham Drive Macon, GA	Westchester	No (altered)

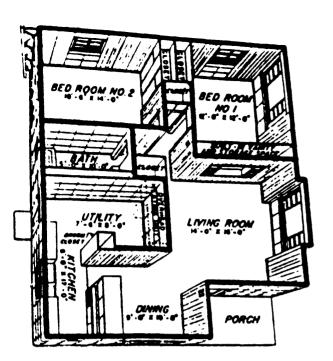
Current Owner/address	Туре	NR Eligible
Columbus		
former Booth House Pelham Drive Columbus, GA	?	demolished
Americus		
Grant Stepp 547 Oak Ave. Americus, GA 31709	Westchester (tan) 2 bedroom	yes
Albany	·	
1001 Second Ave. Albany, GA 31701	Westchester (gray) 2 bedroom	yes
R. E. Klein 1005 Second Ave. Albany, GA 31701	Westchester (gray) 2 bedroom	yes
1200 Fifth Ave. Albany, GA 31707 (owner is: Vivian Harvey 1802 Whispering Pi Albany, GA 31707)		yes
Charles Lutrell 711 Ninth Ave. Albany, GA 31701	Westchester (gray) 2 bedroom	yes
911 Ninth Ave. Albany, GA 31701	Westchester	No (altered front facade)
805 Seventh Ave. Albany, GA	Westchester	No (siding/ asphalt roof)
920 Seventh Ave. Albany, GA	Westchester	No (vinyl siding/ asphalt roof)
1109 Peachtree Terrace Albany, GA	Westchester	No (brick veneered/ asphalt roof)

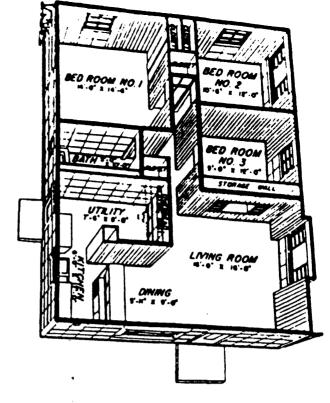
Lustron Houses in Georgia MPN Exhibit I



Blass & Beckman, proposed floor plan (<u>Architectural Forum</u>).

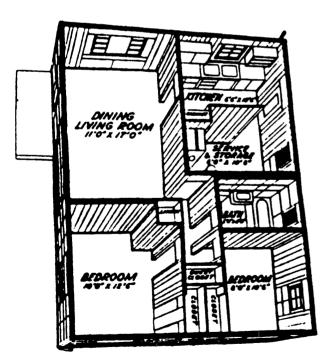
Exhibit J

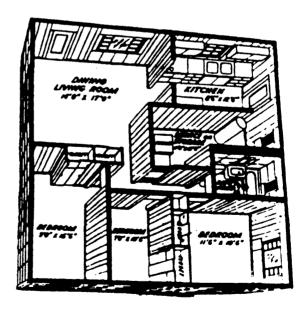




Floor plan, Westchester two-bedroom model.

Floor plan, Westchester three-bedroom model.





Floor plan, Newport two-bedroom model.

Floor plan, Newport three-bedroom model.

(Lustron Corporation Records Collection).