

Lustron Homes in Arlington County

How a Short-Lived Steel Prefabricated Housing Company Left a Mark on Postwar Arlington

BY JENNIFER SALE

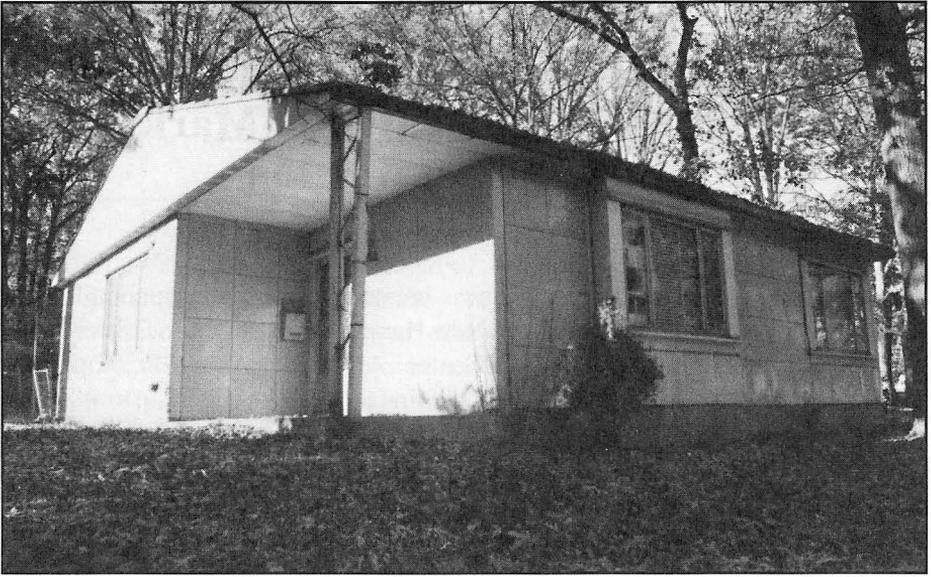
In May 1948, a local sensation was created by the grand opening of the Lustron Corporation's model home on New Hampshire Avenue and E Street NW, near the current site of the Kennedy Center.¹ An average of 1,500 people per day visited the modern home exhibit in the first two weeks.² The Lustron Home opened daily throughout the summer and finally closed its doors in December, having attracted more than 100,000 visitors. A young Arlington couple, William and Eileen Hill, toured the Lustron Home and found it "exciting and modern," returning numerous times with friends to marvel over the porcelain-enameled steel house.³ As Mrs. Hill later recalled the house's appeal,

It had incredible built-in closets and shelves and storage cabinets—you didn't even need to have a chest of drawers in the bedroom. The openness of the main rooms of the house was unusual for that day, as were the big windows. They said you could wash the walls down with Tide, that nothing would ever have to be repainted, and that the roof would never have to be replaced.⁴

They eagerly plunked down \$9,518 for a two-bedroom Westchester Deluxe model to be built on their lot in the Cherrydale neighborhood.⁵

The Lustron Corporation opened model homes in nine other cities, and launched a nationwide marketing campaign in *Life*, *McCall's*, and other popular magazines of the day.⁶ Lustron advertisements promoted the maintenance-free durability of porcelain enamel and innovative features such as the radiant ceiling heating system, built-in storage furniture in every room, and a "Thor" combination dishwasher-clothes washer. Lustron's marketing tagline, "A New Standard of Living," reflected a sincere effort by company founder Carl Strandlund and his employees to manufacture an affordable home using the latest advancements in technology to improve domestic life for the average American family.⁷

Approximately 2,500 homes were built in more than thirty states before the company ceased to operate in March 1950.⁸ Eleven prefabricated all-steel, porcelain-enameled Lustron Homes were erected in Arlington County, more than in any other suburban county outside Washington, D.C. Like many other areas



Jennifer Sale

Lustron Home #550, 5201 12th Street South, prior to disassembly and reconstruction at the Museum of Modern Art.

adjacent to urban centers, Arlington County experienced a massive increase in population during and after World War II. Lustron Homes and other prefabricated, factory—built homes offered a solution to the acute need to expedite housing construction. The Lustron Home’s conservatively-modern ranch house form fit in unobtrusively next to other modest postwar homes.

Today, four of these steel ranch houses remain standing in Arlington. A fifth Lustron Home, serial #550 from the Virginia Heights neighborhood, was donated to Arlington County. It was disassembled in 2006 and temporarily placed in storage. In June 2008, this Arlington Lustron traveled to New York City. The house was rebuilt inside the acclaimed Museum of Modern Art as part of an exhibit showcasing historical and contemporary examples of prefabricated housing.⁹ Now back in storage, this Lustron Home’s brief stint as a museum artifact indicates the fascinating history hidden behind its steel walls.

Lustron Homes were descendants in a long line of innovative prefabricated housing, the product of an evolutionary step in construction technology. A steady succession of twentieth-century risk-takers attempted to create “the house of tomorrow,” but Lustron was one of a limited number that managed to make it into mass production. They are also significant as the only effort to mass-produce houses using porcelain-enameled steel. These unconventional

steel homes represent the unprecedented measures taken by industrial manufacturers, builders, entrepreneurs, policymakers, and the federal government to address the severe housing shortage of the 1940s.

A Brief History of Lustron Homes

In production for just a few years, from 1948 to 1950, the Lustron Corporation of Columbus, Ohio was headed by Carl Strandlund, a dynamic businessman and engineer. Lustron ultimately manufactured around 2,500 of its porcelain-enameled steel panel homes. The porcelain-enameled panels were similar to those used in gas stations, White Castle restaurants, and commercial storefronts in the 1930s and '40s.

Two- and three-bedroom Lustron Homes were sold through a system of franchised local dealers modeled after the automobile industry. Lustron customers could choose from four carefully-developed colors for their exterior panels: "surf blue," "maize yellow," "dove gray," and "desert tan." The house parts arrived on site in an efficiently packed custom trailer. The Lustron Home package included everything necessary for move-in condition—including such items as window blinds, floor tiles, and light fixtures—with the exception of a refrigerator and stove.¹⁰

To erect the Lustron Home, the local dealer-builder first poured a concrete slab foundation, setting in an integrated steel channel. Then the welded steel-stud wall frames were bolted into the channel and the steel roof trusses bolted to the wall frames. Porcelain-enameled steel wall panels backed with fiberglass insulation, measuring 2'x2' on the exterior and 2'x8' on the interior, were then bolted to the frame. Roof shingles, ceiling panels, and interior pocket doors were also made of porcelain-enameled steel. Each Lustron Home had a designated serial number, located on a stamped metal plate fastened to the utility room wall.

Perhaps more than any other postwar prefabricated housing company, Lustron was burdened by high expectations of immediate mobilization and production. The company's good timing and powers of persuasion enabled it to be one of just two prefab companies that received federal funding from the Reconstruction Finance Corporation (RFC). Although the Lustron Corporation was formed during the height of the housing crisis in 1946, the company was not able to completely tool its massive new factory and begin full-volume production until February 1949.¹¹

The production rate was slowed by a chronic need for additional funds for the enormous factory operation and unanticipated challenges such as the problem of local building codes. Missteps in production planning—such as an expensive bathtub-stamping machine that had plenty of surplus capacity but made tubs slightly too large to be sold to other manufacturers—reduced

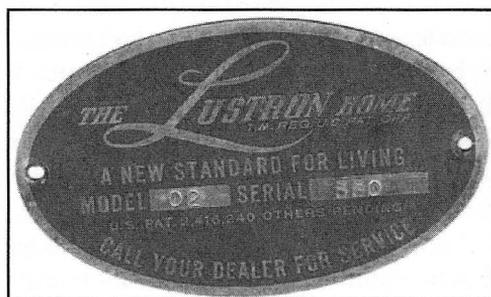
the company's profit potential. Lustron was in the midst of a re-engineering process intended to increase efficiency of operations when political sentiment turned against the company. In February 1950, the RFC called in Lustron's \$37 million loan and the company was forced into bankruptcy.¹² During its short lifespan, Lustron never achieved its original goal of producing 100 homes per day. But the 20-homes-per-day production rate it averaged during the company's peak was a rare accomplishment for a prefabricated housing company in the postwar years.¹³

The Postwar Housing Shortage

In the mid- to late-1940s, the Washington area, like much of the nation, was in the grip of a massive housing shortage. During the war, many cities experienced population booms and resultant housing shortages because of workers attracted to jobs at defense-industry plants. Washington's wartime expansion was caused by an influx, not of industrial workers, but of white-collar workers arriving for thousands of new federal and military jobs in the area. Housing in Washington, D.C. was so scarce that an exasperated President Roosevelt called for all "parasites"—residents not contributing to the war effort—to leave town.¹⁴

The Pentagon, completed in January 1943, housed more than 30,000 civilian and military personnel transferred from various War Department buildings in Washington, D.C.¹⁵ Arlington County had become home to the world's largest office building. After the war ended, population growth in the Washington area continued at a slower rate. Millions of returning veterans needed apartments or starter homes for their new or growing families, yet a wartime shortage of building materials persisted until well after the war had ended. Virginia's and Maryland's suburban populations more than doubled between 1940 and 1950. Arlington County grew from about 57,000 residents in 1940 to well over 135,000 residents by 1950.¹⁶

Amendments to the National Housing Act in 1947 helped alleviate the problem by encouraging high-density construction. Large garden apartment complexes sprang up around the city and suburbs to house veterans and new workers.¹⁷ But demand for quick construction of affordable, single-family homes with two or three bedrooms was still high. Numerous



Bruce Ruble
Lustron Home #550 serial plate. (Photo taken by prior owner of the home.)

subdivisions were developed, with most of the late 1940s growth taking place four to five miles from Washington's downtown core, just outside of earlier streetcar subdivisions such as Cherrydale and Addison Heights.¹⁸

Returning veterans and other workers and their families lived in sometimes desperate conditions, crowding several families into one apartment, staying with an entire extended family under one roof, or living in temporary shelter. Congress and Wilson Wyatt, the Housing Expediter appointed by President Truman, hinged their hopes on the ability of the Lustron Corporation and other prefabricated housing companies to end the nationwide housing shortage. Wyatt's Veterans Emergency Housing Act, under which the Lustron Corporation was initially funded, passed in May 1946 and extended governmental controls on scarce construction materials and provided financial support for prefabricated housing.¹⁹

Lustron Homes in Arlington County

Despite postwar Washington home buyers' strong preferences for brick masonry homes, fifteen Lustron Homes were purchased and erected in the Washington-area suburbs: two in Alexandria, Virginia; eleven in Arlington, Virginia; one in College Park, Maryland; and one in Forest Heights, Maryland. The Lustron model home was the only one erected in the District of Columbia.²⁰ The Lustron Corporation also won a Navy contract in December 1948 to build sixty two- and three-bedroom homes on the Quantico Marine Base, about thirty-five miles south of Arlington. At the time, Lustron's production line was set up only to produce its standard two-bedroom home, so the Quantico contract compelled the company to adapt production for a three-bedroom unit.²¹ The concentration of Lustron Homes in the greater Washington area was relatively small compared with the number erected in the "Prefab Belt" states of Illinois, Indiana and Ohio. The cluster of Lustrons in Arlington likely stemmed from the popularity of the model home and possibly local media coverage of the company's dealings with the federal government. Elsewhere in Virginia, Lustron Homes were built mostly in rural townships: one in Abingdon, one in Bassett, one in Marion, two in Martinsville, two in Bristol, nine in Danville, and two in Norfolk.²²

Prices for a delivered Lustron house kit in the Washington area were set at \$5,762, not including the foundation package, freight charges for overage shipments, or construction costs, according to the Lustron Corporation's confidential Zone and Price List, November 1949.²³ In January 1949, Carlton Construction Corporation, the official Lustron dealer for the Washington area, was selling the two-bedroom deluxe model for \$9,188, which was an approved amount for veterans buying under the G.I. Bill with Veterans Administration loans and

consistent with the local sales costs of other two-bedroom “economy” homes.²⁴ Lustron Homes in Arlington were valued from \$9,000 to \$10,000 at the time the original building permits were issued by the county building inspector.²⁵

Arlington’s eleven Lustron Homes were erected in a cluster of five in Virginia Heights adjacent to Columbia Forest, as well as in the Arlington Heights, Cherrydale, Barcroft, Ballston-Virginia Square, Maywood, and Old Dominion neighborhoods.²⁶ The original owners of Arlington’s Lustrons were typical of the middle-class, often white-collar workers populating Washington’s suburbs in the 1940s. The 1955 Hill’s Directory for Arlington County lists the occupations of residents at known Lustron Home addresses: maintenance man for Capitol Cadillac & Oldsmobile; economist with the U.S. Government; U.S. Navy; office secretary with FiberGlas; U.S. Government; architect for the Department of the Navy; linotype operator for the Evening Star newspaper; engineer with the National Capital Housing Authority; and attorney for the Department of Justice.²⁷

Columbia Forest–Virginia Heights Neighborhood

While many large subdivisions were springing up across the Washington D.C. area in the late 1940s, several small local builders at that time constructed homes in groups of five to ten.²⁸ Five of Arlington’s original eleven Lustron Homes were constructed between the historic transportation corridors of Columbia Pike and Leesburg Pike, in the Virginia Heights neighborhood adjacent to Columbia Forest. Three of the five remaining Lustron Homes in Arlington exist here within one block of each other.²⁹ Another Lustron Home still stands at 2915 Seventh Street South in Arlington Heights, and the fifth was donated to Arlington County in 2006 and dismantled for storage.

The Columbia Forest–Virginia Heights neighborhood features several types of prefabricated housing, as well as concrete-block housing also used in expedited construction. The Columbia Forest community sprang from the wartime housing shortage afflicting Arlington County. Between 1942 and 1945, the Defense Housing Corporation (DHC) and the Army Corps of Engineers constructed the Columbia Forest development—a permanent planned community of two-bedroom, two-story concrete block or brick homes in the Colonial Revival style for much-needed rentals to married officers and ranking government officials.³⁰ Only eight miles west of Washington, this location in Arlington County meant an easy commute for those working downtown, at Fort Myer, or in the Pentagon.

Further down Columbia Pike and elsewhere in Arlington, innovative garden apartment complexes were constructed in the early 1940s, also to help alleviate the local housing shortage. Columbia Forest was one of several DHC

projects in the Washington area. Other DHC-developed communities are the Fairlington community in Arlington, and McLean Gardens and Naylor Gardens in Washington, D.C.³¹ One of the more unusual DHC projects to house war workers was on Lee Highway in Falls Church, just west of Arlington, where twelve “igloo homes” were constructed in 1941 of balloon shells sprayed with concrete.³²

After the war ended, the Columbia Forest homes were sold to the public, with special preferences given to returning veterans. In 1947, the adjoining area stretching west into Fairfax County was purchased for development by A.K. Waterval of the Virginia Heights Development Corporation. Waterval planned to erect more than 100 prefabricated steel-panel Harmon Homes, but only seven were built. The Harmon Home built in the Arlington County portion of Virginia Heights was the first to be constructed.³³

Deed books show that Waterval sold the five Lustron Home lots beginning with one in September 1947, another in November 1947, and three in February 1949.³⁴ County building permits were obtained in April or May of 1949, with the houses probably constructed by the fall of 1949. More research is needed, but the proximity of these five Virginia Heights Lustrons makes it likely that Waterval coordinated with the local Lustron dealer to offer the lots as Lustron Home sites.

The Lustron Corporation was not involved in construction but selected one or more companies per area to serve as dealer/builders. As previously stated, Carlton Construction Corporation was the designated Lustron franchise dealer for the Washington, D.C. area.³⁵ However, the May 1949 building permits for four of these Virginia Heights Lustrons list Construction Associates, Inc., based in Portsmouth, Virginia, as the builder. This company may have had a relationship with the Lustron franchise dealer in southeastern Virginia, the George T. McLean Co. of Portsmouth, Virginia.³⁶ The fifth Virginia Heights Lustron’s April 1949 building permit lists Lustron Corp. as the builder, but most likely was erected by Construction Associates or Carlton Construction. Carlton Construction Corporation erected three of Arlington’s eleven Lustrons, Construction Associates erected six, and the MacFarlane Company erected one.³⁷ The Arlington County Division of Building Inspection approved construction permits for each of these Lustrons within a few days of receipt, demonstrating unusual expediency.

In March 1949, Waterval and his Virginia Heights subdivision were recognized with a top award in community planning from the Washington Board of Trade.³⁸ However, Waterval sold the rest of the lots to Old Dominion Developers, who went on to develop the rest of the subdivision with two- and three-bedroom ranch-style homes with conventional construction.³⁹ And yet

another prefabricated house was built in Virginia Heights—a stressed-skin plywood panel Gunnison Home, built in 1950.⁴⁰

The ranch-style Lustron Homes, Harmon Homes, and Gunnison Home all sit inconspicuously among the other conventionally-constructed ranch houses in Virginia Heights. The DHC's Columbia Forest subdivision and the privately-developed Virginia Heights subdivision had grown to include an interesting assortment of housing types designed to quickly and cheaply alleviate housing shortages. The presence of these Virginia Heights prefab homes, and others elsewhere in the county,⁴¹ are indicative of Arlington's rapid growth in the 20th century, the need to quickly build housing for an influx of war workers and new residents, and an openness to new ideas in construction.

Conclusion

Because of the urgent need to provide housing for federal and defense workers several years before the nationwide postwar housing crisis, Arlington County officials may have been more receptive to new approaches in housing construction. Many potential Lustron buyers in other areas were stymied by doubtful building inspectors, building codes, deed restrictions, and risk-averse lenders unwilling to provide mortgages for these unconventional steel homes. However, Arlington County appeared to welcome these new prefabricated steel homes, approving building permits with unusual speed. Further research is needed to determine why the Arlington County building code, and perhaps its building inspector Andrew Jensen, were so amenable to the unconventional Lustron Home.

The five remaining Arlington Lustrons were part of a new approach to housing. Their steel porcelain enamel construction, radiant ceiling heating system, and factory production demonstrated how engineering developments could improve upon earlier prefabricated housing projects. The Lustron project focused on mass production technology in its attempt to provide a solution to the postwar need for quickly-constructed affordable housing. The house's contemporary ranch design, large picture windows, open floor plan, and space-saving built-ins also offered buyers exciting new architectural features along with modern conveniences.

In the face of extreme local population growth, Lustrons found a niche in Arlington County and particularly in the Virginia Heights neighborhood. There they sit as complements to other innovative steel and traditional ranch houses, showcasing a variety of solutions to the affordable house. The story of the Lustron Home and Lustron Corporation also provide a window into a moment in American history when society and the federal government were receptive to industrial housing. With Arlington's Lustron Home #550 featured

at the Museum of Modern Art, another layer of history has been added. More than just an architectural novelty, the Lustron Home is a precision-engineered marvel of mass-production. This small steel house embodies the resourcefulness, ingenuity and optimism of America's "Greatest Generation."

Jennifer Sale serves on the Board of Directors of the Arlington Historical Society and is a member of the Arlington Heritage Alliance. She recently earned a Master's degree in historic preservation from Goucher College. Her Master's thesis examined the preservation of Lustron Homes. Since 2004, she has been involved on a volunteer basis with Arlington County's Historic Preservation Program's efforts to preserve Arlington's remaining Lustron Homes. She has helped disassemble and reassemble a Lustron Home, as a member of a small group of volunteers who rebuilt Arlington's Lustron Home #550 inside the Museum of Modern Art in New York City.

Endnotes

¹ "9219 Pay Two Bits To Visit Lustron House in Six Days," *Washington Post*, 6 June 1948, p. R12.

² "1500 Daily See House," *Washington Post*, 13 June 1948, p. R1.

³ Jura Koncius, "Little Metal Houses Maintain Their Mettle," *Washington Post*, 30 June 1988, p. H20.

⁴ *Ibid.*

⁵ *Ibid.*

⁶ Douglas Knerr, *Suburban Steel: The Magnificent Failure of the Lustron Corporation* (Columbus: Ohio State University Press, 2004), p. 107.

⁷ In a February 1948 plant newsletter, Carl Strandlund encouraged employees, saying they were "making one of the vital and most important contributions to the American way of life...It is a challenge worthy of the best in all of us." *Lustron Newsletter*, 7 February 1948. Interviews and quotes from former Lustron employees attest to the shared belief in the mission to provide affordable homes for veterans. See Alex James, *An Employee's Perspective of the Lustron Home* (Columbus, OH: privately printed, 2003); and interviews in *Lustron: The House America's Been Waiting For* DVD, directed by Ed Moore, Bill Ferehawk and Bill Kubota (Madison Heights, MI: KDN Films, 2002).

⁸ Knerr, *Suburban Steel*, p. 173.

⁹ See Patricia Kime, "From Arlington Prefab to N.Y. Fabulous," *Washington Post*, 1 November 2008, p. F1.

¹⁰ Thomas Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment* (North Carolina: McFarland & Co., Inc., 2002), p. 25.

¹¹ Lee E. Cooper, "Lustron Making 25 Houses a Day," *New York Times*, 26 February 1949, p. 25.

¹² Burnham Kelly, *The Prefabrication of Houses* (New York: MIT Press and John Wiley and Sons, Inc., 1951), pp. 79-80; Knerr, *Suburban Steel*; Colin Davies, *The Prefabricated Home* (Chicago: Reaktion Books, 2005), pp. 57-61.

- ¹³ In his 1951 *Prefabrication of Houses* (pp. 338-39), Burnham Kelly indicates that few, if any, companies were achieving the estimated twenty-homes-per-day production rate needed to realize price breaks on materials and other economies of scale. According to Kelly's survey of the prefabricated housing industry, the largest annual volumes reported in 1947 were between 1,500 and 2,500 houses. The companies achieving these rates – American Houses, National Homes, and Kaiser Community Homes – were well-established, having started operations during or before World War II, using wood-framed or stressed-skin plywood methods. In this context, the newly-formed Lustron Corporation's output of approximately 2,500 houses during its first two years of production seems like a remarkable achievement.
- ¹⁴ Christine Sadler, "President Suggests 'Parasites' Quit D.C.," *Washington Post*, 31 January 1942, p. 12.
- ¹⁵ Steve Vogel, *The Pentagon: A History* (New York: Random House, 2007), p. 329.
- ¹⁶ U.S. Federal Census for Arlington County, 1940 and U.S. Federal Census for Arlington County, 1950; C.B. Rose, Jr., *Arlington County, Virginia: A History* (Arlington, Virginia: Arlington Historical Society, 1976), pp. 206-207.
- ¹⁷ Christopher Martin, *Tract House Modern: A Study of Housing Design and Consumption in the Washington Suburbs, 1946-1960* (Ph.D. diss., George Washington University, 2000), p. 62.
- ¹⁸ *Ibid.*, p. 76.
- ¹⁹ Knerr, *Suburban Steel*, pp. 68-69.
- ²⁰ Feters, *The Lustron Home*, p. 159.
- ²¹ "Steel Prefab Homes Win Navy Contract," *Washington Post*, 5 December 1948, p. R1.
- ²² Feters, *The Lustron Home*, p. 173.
- ²³ *Ibid.*, p. 151.
- ²⁴ Conrad P. Harness, "Post Takes a Camera Tour of New Homes," *Washington Post*, 30 January 1949, p. R1.
- ²⁵ Arlington County Department of Community Planning, Housing & Development, Building Permits #22471, 22487, 22543, 22675, 22777, 22775, 22774, 22776, 22799, 22792, and 23634.
- ²⁶ Cynthia Liccese-Torres and Kim A. O'Connell, *The Illustrious Lustron: A Guide for the Disassembly and Preservation of America's Modern Metal Marvel* (Arlington: Arlington County, Virginia, 2007), p. 5.
- ²⁷ *Hill's Directory for Arlington County, 1955*. Listings for owners William and Eileen Hill, Lily Mary David, Gail and Margaret Prophet, Paul Oman, Philip Mandel, Rhulin and Gladys Thomas, Ralph and Essie Crain, and Edward and Alice Sanders.
- ²⁸ Harness, "Post Takes a Camera Tour of New Homes," p. R1.
- ²⁹ The Virginia Heights Lustron Homes are located at 1112 and 1117 South Forest Drive, and at 1124 South Frederick Street.
- ³⁰ EHT Traceries, *National Register of Historic Places Registration Form – Columbia Forest Historic District*, October 2003.
- ³¹ "Fairlington's History: Questions and Answers," Fairlington Historic District, <http://www.fairlington.org/History.htm>; accessed March 2004, Internet.
- ³² Conrad P. Harness, "Uncle Sam Hangs 'For Sale' Sign on Its 'Igloo' Homes in Virginia," *Washington Post*, 8 June 1947, p. R1.
- ³³ EHT Traceries, Inc., *National Register of Historic Places Registration Form: Virginia Heights Historic District* (Richmond: Virginia Department of Historic Resources, 2002), p. 7-4.
- ³⁴ Eric Dobson, "Lustron Homes in Arlington County Virginia," (Master's thesis, University of Virginia, 1992), pp. 12-20.
- ³⁵ "Lustron Names Dealer," *Washington Post*, 25 July 1948, p. R1.
- ³⁶ "Lustron Model Home Due to Close Tonight," *Washington Post*, 12 December 1948, p. R3.

³⁷ Liccese-Torres and O'Connell, *The Illustrious Lustron*, p. 9.

³⁸ Conrad P. Harness, "Board of Trade Honors Owners, Architects and Builders of Eye-Appealing Structures," *Washington Post*, 17 March 1949, p. 9.

³⁹ EHT Tracerics, Inc., *National Register of Historic Places: Virginia Heights Historic District* (Richmond: Virginia Department of Historic Resources, 2002), p. 8-40.

⁴⁰ *Ibid.*, p. 7-4.

⁴¹ Sears Homes can be found throughout Arlington, particularly close to rail lines. Poured-concrete homes were built in Aurora Highlands in 1910, using a system patented by Washington D.C. architect Milton Dana Morrill. Fort Myer is home to the 1877 Commissary Sergeant's Quarters, built with an interlocking board system designed by Montgomery Meigs. The author is currently researching these and other examples of prefabricated housing in Arlington.