



United States Department of Interior
National Park Service

National Register of Historic Places
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900A). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Eggiman, Ernest, House

other names/site number Motohome # 3623

2. Location

street & number 857 South Shore Drive N/A not for publication

city or town Madison N/A vicinity

state Wisconsin code WI county Dane code 025 zip code 53715

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this X nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property X meets does not meet the National Register criteria. I recommend that this property be considered significant nationally X statewide X locally. (See continuation sheet for additional comments.)

[Signature] 5/5/94
Signature of certifying official/Title Date

State Historic Preservation Officer-WI
State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria.
(See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State of Federal agency and bureau

Eggiman, Ernest and Helen, House Madison, Dane County, WI

Name of Property County and State

4. National Park Service Certification

- I hereby certify that the property is:
- entered in the National Register.
 — See continuation sheet.
 - determined eligible for the National Register.
 — See continuation sheet.
 - determined not eligible for the National Register.
 — See continuation sheet.
 - removed from the National Register.
 - other, (explain:)

Signature of the Keeper Date of Action
Edson H. Beall 6-17-94

Entered in the
National Register

5. Classification

Ownership of Property (check as many boxes as apply)
 private
 public-local
 public-state
 public-federal

Category of Property (Check only one box)
 building(s)
 district
 site
 structure
 object

Number of Resources within Property (Do not include listed resources within the count)	
Contributing	Noncontributing
<u>1</u>	<u>1</u>
	buildings
	sites
	structures
	objects
<u>1</u>	<u>1</u>
	Total

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.)
N/A

Number of contributing resources previously listed in the National Register
None

6. Function or Use

Historic Functions (Enter categories from instructions)
DOMESTIC/Single Dwelling

Current Functions (Enter categories from instructions)
DOMESTIC/Single Dwelling

7. Description

Architectural Classification (Enter categories from instructions)
International Style

Materials (Enter categories from instructions)
foundation Concrete
walls Concrete
Asbestos
roof SYNTHETICS/Rubber
other Steel

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

Eggiman, Ernest and Helen, House
Name of Property

Madison, Dane County, WI
County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the
criteria qualifying the property for the
National Register listing.)

Areas of Significance
(Enter categories from
instructions)

A Property is associated with events
that have made a significant
contribution to the broad patterns of
our history.

ARCHITECTURE

ENGINEERING

INDUSTRY

B Property is associated with the lives
of persons significant in our past.

Period of Significance

C Property embodies the distinctive
characteristics of a type, period, or
method of construction or represents
the work of a master, or possesses
high artistic values, or represents a
significant and distinguishable entity
whose components lack individual
distinction.

1936

1936-1943

D Property has yielded, or is likely to
yield, information important in
prehistory or history.

Significant Dates

1936

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Significant Person
(Complete if Criterion B is
marked above)

N/A

A owned by a religious institution or
used for religious purposes.

Cultural Affiliation

B removed from its original location.

N/A

C a birthplace or grave.

D a cemetery.

Architect/Builder

E a reconstructed building, object, or
structure.

McLaughlin, Robert Jr.

F a commemorative property.

G less than 50 years of age achieved
significance within the past 50 years.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographic References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more
continuation sheets.)

Eggiman, Ernest and Helen, House
Name of Property

Madison, Dane County, WI
County and State

Property Owner

Complete this item at the request of SHPO or FPO.)

name Nick Lonello

street & number _____ telephone _____

city or town _____ state _____ zip code _____

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects, (1024-0018), Washington, DC 20503.

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Eggiman, Ernest and Helen, House
Madison, Dane County, WI

The Ernest and Helen Eggiman house is a two-story, flat-roof, cubic-form, prefabricated dwelling manufactured in 1936 and erected over the winter of 1936-37. It is located on the edge of Monona Bay in the city of Madison. Its neighborhood was built largely on filled swamp land and is predominantly period revival style and bungalow form, single family housing although several other examples of the International Style are also located along West and South Shore Drive. The house is located across the bay from the Wisconsin State Capitol and has a spectacular view of the capitol.

The main facade of the Eggiman House faces east on a typical residential corner lot. The building is sited in a conventional fashion roughly in the center of the lot and has minimal landscaping consisting of a few mature trees and shrubs.

The house is composed of a two-story cubic block with a smaller one-story rectangular block attached to the southeast corner. The one-story portion was originally an attached garage. The house has a steel frame infilled with asbestos concrete panels. The vertical joints of these panels are covered with aluminum pilaster strips creating a distinctive panellized appearance. It sits on a poured concrete foundation with a full basement. The exterior composition is a complex, asymmetrical arrangement of solid wall masses and horizontal bands of fenestration typical of the International Style.

Fenestration is irregular and determined by the functional requirements of the interior. Windows are four-light, paired steel casements occurring singly or arranged in continuous bands. The windows have interior storms and screens. The exterior doors are modern, steel and glass replacements. The main facade is arranged with the one-story former garage projecting from the southeast corner. The former garage is balanced by a nearly continuous expanse of fenestration extending northward from the garage, wrapping around the northeast corner of the main block and terminating on the north elevation. The main entrance is located in the center of this expanse which terminates on the north elevation with a secondary entrance door. An exterior concrete patio with an aluminum canopy wraps the corner as well, its length corresponding to the fenestration. Corner windows are also located at the northwest and southwest corners of the first story. On the second story, wrap around windows on the southeast, northeast, and northwest corners correspond to the location of bedrooms on the interiors.

A rear entrance is located off the kitchen on the rear (west) elevation and a second story door on the south elevation leads to the

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flat roof deck of the former garage. Several other windows are placed asymmetrically on elevations based on functional requirements of the interior plan.

INTERIOR

The interior features a compact arrangement grouped around a central staircase. Entering through the main entrance, the staircase to the second floor is straight ahead, the living room and dining room are to the right and left respectively. There is no vestibule, hall or other division separating the rooms, the space flows without interruption from room to room. The living room occupies roughly the north half of the first floor. It has a fireplace with a tabbed stone surround, a rather anachronistic looking feature in an otherwise modern decor. The dining room has a blonded-wood built-in cupboard along its north and west walls that appears to be a circa 1960 addition. The kitchen is west of the dining room and has been remodelled. It is difficult to ascertain whether any of the kitchen built-ins are original. A staircase leads from the kitchen to a full, finished basement. On the east wall of the dining room a single-panel wood door leads to the former garage which was remodeled in 1957 into a den and bathroom. The garage door was replaced with sliding patio doors and the room was partitioned to separate the bathroom area. Built in bookshelves were added to the north wall.

The interior of the first floor is devoid of ornamentation. There are very narrow wood baseboards and no cornice. Its most distinctive features are the vertical panels created by the flat aluminum pilasters covering the joints of the wall panels and the circular heat vents in the ceiling of the living and dining rooms. Another unusual aspect is that the staircase has steel stringers and risers with a plywood balustrade and wood treads. The original fiberboard flooring has been covered with oak parquet flooring.

On the second floor, a short central hall/landing leads to three bedrooms and a bath. The single-panel doors are hung on steel jambs. Original fiberboard floors are carpeted. The bathroom is entirely original with tile floor and porcelain fixtures. The sink is partially recessed into the wall as a space-saving device.

The house is largely original with the exception of the garage conversion, kitchen remodelling and new floor coverings. This is remarkable considering the largely experimental nature of the materials and systems in this house. The current owner is sensitive and respectful of the building's unusual features.

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The Motohome's standard specs called for a concrete block foundation with no basement, the Eggiman House is an obvious exception. The wall framing is composed of a steel sill bolted to the foundation and wall framing of 2 1/4" hollow, stamped steel studs every 4 feet. The walls have no cladding and are composed of solid panels of 2 1/4 inch thick 4' by 8' sheets of insulating fiberboard faced on 2 sides with asbestos cement. These wall panels were known by the trade named "Pyrestos". Joints are caulked and covered with extruded aluminum pilasters and topped by an aluminum cornice.

Floors and roof are supported by steel joists, subfloors are an unusual gypsum plank originally finished with laminated pressed fiberboard. Roof and floors are insulated with aluminum foil. Ceilings were said to be finished with insulating boards for sound deadening, with steel moldings covering the seams. This is not visible in the Eggiman House and there is no evidence that the ceilings were finished in this manner. Interior partitions are 2" gypsum plank that are doweled together and arrived pre-painted or papered.

The noncontributing building is a single story, detached, two-stall garage constructed in 1957 when the former garage was converted to a den. The garage is conventionally built with a wood stud wall frame, however, a flat roof and plywood walls with vertical battens over the seams mimic the style of the house and blend the garage with the residence. It is sited at the northwest corner of the lot.

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The Eggiman House is Wisconsin's only Motohome, a prefabricated house marketed and sold by American Houses, Inc. It is being nominated to the National Register for its local and statewide significance under criterion A to the history of industry as one of the most important examples of the attempt to industrialize the production of housing during the Great Depression. It is also significant at a local and statewide level under criterion C, both for its architectural design as an excellent example of the International Style and for its Engineering significance as one of the state's finest examples of the application of industrial engineering to the design of residential buildings.

The Motohome, constructed from 1932 to 1937, was a low cost, prefabricated, modular, steel frame house of panelized construction. The home was fireproof, soundproof, strong, lightweight, low maintenance, and built of durable, technologically advanced materials. The name (Motohome) is a likely attempt to convey an impression of this house as a "Machine to Live In," as technologically advanced as an auto of the time.

HISTORICAL BACKGROUND

The area surrounding Madison's lakes was inhabited by the Winnebago tribe until their removal following the Black Hawk War of 1932. Under the terms of the treaty signed on June 1, 1833, the Winnebagos ceded all their lands south of the Wisconsin River and north of the Rock River, although many continued to camp in the Madison area.¹ ? 1932?

Euro-American settlement of Madison began with the purchase of 99 acres by land speculator and Michigan Territory legislator James Duane Doty in 1835. Doty organized the Four Lakes Company, to develop the tract and with other investors came to hold about 1,360 acres on the "Isthmus," a narrow tract separating Lake Mendota and Lake Monona. Through Doty's promotions, Madison was chosen as the location for the second territorial capitol.²

¹David Mollenhoff, Madison: A History of the Formative Years, p. 18.

²Ibid., pp. 21-22.

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The city grew slowly in its first decade, but boomed in the 1850s with the influx of European immigrants, assisted by its choice as location for both the Wisconsin state capitol and location of the University of Wisconsin. These two decisions effected the growth and composition of Madison from that point forward. By 1856 the population had grown to 9,000 people.³ By the turn of the century, Madison had nearly doubled its population and developed into a regional commercial center, manufacturer of agricultural implements, and resort area.⁴

The early twentieth century was characterized by progressive reform, community boosterism, and significant growth in both the university and state government. In this period, Madison's extensive marsh land (which comprised 1/4 of the original plat of the city) was systematically filled and developed.⁵

HISTORY OF THE MOTOHOME

Motohomes were the brainchild of architect Robert W. McLaughlin, a graduate of Princeton's School of Architecture. McLaughlin had a notable practice in Princeton. He specialized in residential design for wealthy clients until the onset of the Great Depression. He found himself idled and like many others sought a solution to the housing crisis of the Depression through design of an inexpensive mass market house.⁶

American Homes, manufacturer of the Motohome produced the first true prefabricated house which was sold in 1932. This prototype for the Motohome was sold to the president of the Jeddo-Highland Coal Company, who was interested in its application as worker housing and wanted a showpiece to exhibit his novel heating and cooking unit.⁷ Twenty

³Ibid., p. 45.

⁴Ibid., p. 169.

⁵Ibid., p. 398.

⁶Alfred Bruce and Harold Sandbank, The History of Prefabrication, p. 8.

⁷"Mass-produced Houses in Review." Fortune, April 1933, p. 56.

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units were subsequently sold to Jeddo-Highland coal miners in Hazelton, PA.⁸

The Motohome received substantial financial backing in 1934 from a prefabrication investment group called Houses, Inc. With the technical assistance of General Electric and American Radiator, American Houses developed a unique factory-assembled utility core christened the "moto-unit" after which the home was named.⁹

Motohomes went into full production in 1935, debuted in a ceremony in Wanamakers Department Store in New York where a cellophane-wrapped Motohome erected in the store was "unveiled" by Franklin Delano Roosevelt's mother. The home was toured by 800 people an hour, prompting Wanamakers to cancel advertising for fear of overwhelming crowds.¹⁰ 500,000 people were estimated to have visited the house during its stay at Wanamakers. It is likely that the tremendous interest in the "cellophane house" helped American Homes become the number one prefabricator in the country.¹¹

In answer to the architectural critics who argued that prefabrication would lead to boring repetition, American Homes claimed in various publications it had anywhere from 6 to 15 basic models and boasted 140 different house plans could be based on their modular units.¹² Cost ranged from \$3,500 to \$7,200, not including erection or land cost.

⁸History of Prefabrication, p. 9.

⁹"More Integration, Less Prefabrication spell success for American Houses, Inc.," Architectural Forum, July 1940, p. 69.

¹⁰"Houses: Sectional Motohome Makes its Debut in Cellophane," News Week, 13 April 1935, p. 28.

¹¹Kelly, Burnham. The Prefabrication of Houses: A Study by the Albert Farwell Bemis Foundation of the Prefabrication Industry in the United States, p. 41; and "More Integration, Less Prefabrication spell success for American Houses, Inc.," Architectural Forum, July 1940, p. 69.

¹²"American Houses, Inc.," Architectural Forum, January 1934, pp. 277-282.

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Additions could be made simply by "unbuttoning" a wall and attaching an additional module. The buildings were built without working drawings, instead a schedule of materials were drawn up identified by key numbers; for example, it might include 6 X-2C cornices or 24 B-3C wall panels, etc. Homes were delivered in trucks emblazoned with "This Contains a New American Motohome." Erection took as little as two weeks and was largely a process of bolting together sections.¹³

Madison's Motohome, was erected by "Advanced Homes, Inc.," a building contracting firm operated by local architect Henry T. Dysland for salesman Ernest Eggiman.¹⁴ Departing from the standard specifications, it was built with a full basement. It was the 54th Motohome and given the construction date of this building, it was probably one of the last Motohomes erected. The total number of Motohomes is difficult to ascertain, various sources claim 100 or 150 Motohomes were built but these numbers are difficult to substantiate. By sometime in 1936, it became apparent to American Houses, that considerable public resistance to Modern architecture was hurting potential sales. The Motohome was scrapped in favor of a rectangular steel frame with a conventional wood exterior. In 1938 the steel frame was scrapped in favor of factory assembled stud wall panels and conventional western platform framing.¹⁵

INDUSTRIAL SIGNIFICANCE

The history of prefabrication began with attempts to standardize house construction in the mid 1800s. The essential ingredients in this

¹³"American Houses, Inc.," Architectural Forum, April 1934, pp. 277-282; "Houses: Sectional Motohome Makes its Debut in Cellophane," News Week, 13 April 1937, p. 31.

¹⁴Building permit files for 857 South Shore Drive, City of Madison Department of Planning and Development, 215 Martin Luther King Jr. Blvd., Madison, WI. and city directory

¹⁵History of Prefabrication, p.47 and "More Integration, Less Prefabrication spell success for American Houses, Inc.," Architectural Forum, July 1940, p. 69.

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standardization were: dimensioned lumber which replaced hewn timber framing; cut nails which replaced pegs and hand forged nails; and stud wall construction with regular stud placement on a standardized interval. These developments resulted in factory-produced building materials and even components such as doors and sash. Construction, however, remained a handicraft process of cutting each piece to length on site and joining components with nails. The next step in this evolution was the popularization of the "mail order" house at the turn of the century which went a step further by pre-cutting lumber to necessary dimensions.

True prefabrication intended to go even further by manufacturing all building components and reducing the construction process to pure assembly. The Motohome's proponents claimed 85% of the process of construction could occur in the factory with the resulting efficiency of large-scale production. Significant labor savings would be incurred by reducing the time spent in construction by as much as 80%.

The near total collapse of the housing industry in the early years of the Great Depression resulted in a tremendous housing shortfall. Madison's home construction dropped from a high of over 260 per year to 28 houses in 1933.¹⁶ Nationwide, in 1929, 20% of newlyweds bought a new house, this figure plummeted during the Depression to 6 1/4%. By 1935, the FHA estimated a shortage of 1,750,000 dwellings.¹⁷

There was considerable discussion during the Depression about the \$5000 house. Numerous architects (including Frank Lloyd Wright and his Usonian House) wrote about, built, or experimented with houses in this price range. The reason for this obsession was obvious. According to Architectural Forum, not only was it the biggest category

¹⁶"Survey Shows Small Homes Favored Here," Wisconsin State Journal, 16 May 1937, p. 5.

¹⁷"Houses: Sectional Motohome Makes its Debut in Cellophane," News Week, 13 April 1937, p. 31.

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of construction, once building resumed in 1936, it was "pretty nearly the boom itself."¹⁸ In Madison, 53% of the homes built from 1929 to 1935 were built for under \$5,000.¹⁹ Only a fraction of those houses were designed by architects, of 122 houses built in Madison in 1937, only 7 were architect-designed.²⁰ Any improvement in that percentage meant employment for beleaguered architects.

Construction industry in the early 1930s was characterized more by hype and boosterism than real construction. One of the larger manifestations of industry interest in promoting construction was the massive experimentation, mostly on paper, by people idled by the virtual collapse of the construction industry. Architects, building contractors, realtors, and developers were all involved in this effort and scores of experimental houses were built as models or sold for less than cost despite the fact that the production facilities for filling orders on these one of a kind "prefabs" did not exist.²¹

The extent of support for prefabrication may be gauged by this rather extraordinary statement from the board of directors of the American Institute of Architects in 1933:

¹⁸"Men and Deeds." Architectural Forum, October 1936, p.74.

¹⁹"Survey Shows Small Homes Favored Here," Wisconsin State Journal, 16 May 1937, p. 5.

²⁰"Madison Day by Day." Wisconsin State Journal, 27 February 1938, p. 30.

²¹History of Prefabrication, p. 9.

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The board of directors of the American Institute of Architects recognizes fully the absolute necessity of the elimination of all waste and uneconomic features in the production of small houses for the purpose of reducing costs...Therefore the board recognizes and commends proposals for mass or factory production of small houses.²²

By 1936 fewer than 1,000 prefabricated houses were estimated to have been built in the United States.²³ Despite this small number, over 48 major prefabrication systems were advanced, comprised of three basic systems: wooden and steel frames with panel infill, block and precast concrete panels, and frameless construction. Over 60% of these systems were based on a frame and panel system which was also the basis of the Motohome's structural system.²⁴

The dearth of business in the depression caused numerous large industrial concerns to experiment with prefabrication including U.S. Steel, Douglas Fir Plywood Association, the American Rolling Mill Company, and closer to home, A. O. Smith and the Harnisfeger Corporation, both of Milwaukee, and the Forest Products Lab in Madison. Involvement of large corporations in prefabrication made business news in media outlets such as the New York Times and Fortune magazine giving legitimacy to an emerging industry. A New York Times article in 1933 claimed mass-production of houses would be the industry which would bring the country out of the Depression.²⁵

²²"Standardized Homes Urged by Architects," New York Times, 16 February 1933, section 2, p. 38.

²³"Houses: Lack of Organization and Cost Retard Progress of Prefabricated Dwellings," Literary Digest, January 23, 1937, p. 18.

²⁴"48 Systems of Prefabrication," American Architect and Architecture, September 1936, p. 28.

²⁵History of Prefabrication, p. 9.

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The goals of prefabrication were to bring the efficiency of mass production and its consequent cost reduction to home building (e.g. the Model T), and provide proven quality at a set price (e.g. McDonalds). For many proponents of low-cost housing, prefabrication seemed the only method capable of producing the enormous numbers of houses necessary to adequately meet the need for decent, affordable housing brought on by the depression. A small house forum sponsored by the American Institute of Steel Construction concluded that affordable working class home could not be built without radical changes in design and construction.²⁶

While Americans had seen radical change in transportation, industry, communications, and technology since the industrial revolution, the practice of house building had changed relatively little and the time for change seemed close at hand. Mass-production seemed so inevitable, architect Harvey Wiley Corbett who worked on such projects as Rockefeller Center predicted in 1932 that "'in five, ten or fifteen years' no one would be living 'in the old English cottages we like so much today.'"²⁷

The Motohome is significant to Industrial history as one of the most important experiments in industrializing the housing industry of the 1930s. The dream of the Motohome was for an industrially manufactured, low-cost, durable and efficient house which through prefabrication would become affordable to the large number of Americans otherwise unable to afford their own home. The Eggiman House is the most significant example known in Wisconsin of the attempt to revolutionize the production of housing in the midst of the most severe housing and economic crisis of the Twentieth Century.

²⁶"Everyman's House" New York Times, 29 May 1932, sec. 3, p. 1.

²⁷"Sees Future Homes Bought Like Autos," New York Times, 25 May 1932, p. 21.

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ENGINEERING SIGNIFICANCE

The Motohome was on the cutting edge of technological innovation in both materials and systems. Its construction coincided with the highest point of experimentation with steel as a residential building material from 1933 to 1937.²⁸

Its modular design was based on 4 foot by 8 foot module with 2 foot modules where needed. Steel studs were spaced every 4 feet. From the perspective of the early 1930s, it seemed steel would inevitably dominate the construction industry. Much of the output of the industrial economy had made a transition from wood to steel such as medicine cabinets, filing cabinets, coaster wagons, and even furniture. The Motohome and its main competitor, General Homes Inc., significantly advanced the use of steel in home construction by abandoning a prevalent tendency to use steel as a direct substitute for wood; replacing steel stud walls with modular posts more akin to timber frame construction.

An extensive article in Architectural Forum discussing both new materials and methods of construction highlighted several innovative aspects of the Motohome although it was not specifically identified in the article. The flooring system was highly advanced for its time. The webbed bar joists or "lattice truss" used in Motohome joists were described as "one of the most advanced designs for steel floors."²⁹ Its gypsum plank, tongue and groove flooring with steel seams was an innovative flooring system for both its light weight and speed of installation. Its use of aluminum foil insulation was also on the cutting edge. The use of aluminum as insulation was examined extensively in a 1934 Architectural Forum article.³⁰ The article concluded that foil was comparable in efficiency to the best known insulation. It's extreme low weight must have made it particularly

²⁸History of Prefabrication, p.41.

²⁹"New Materials and Methods in Country House Construction." Architectural Forum, March 1933, p. 231.

³⁰"American Houses, Inc," Architectural Forum, January 1934, pp. 277-282.

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attractive to Motohome designers who were especially concerned with the shipping weight of building materials. Other unusual engineering features included electrical outlets stamped into the steel studs. To expedite construction and reduce maintenance, color was incorporated into the wall materials, both interior and exterior, to eliminate painting.³¹

On the interior, the "moto-unit" was heralded in the company's advertising literature as the "heart" of the Motohome. The centralized moto-unit reduced costs of mechanical systems by shortening runs of wiring, plumbing and heating ducts, an idea promoted by architect LeCorbusier in France. The moto-unit was the first commercial application of combined utilities in an independent unit.³² The downfall of the moto-unit was it required maintenance by specialized repairmen. Consequently, it was later removed from the Eggiman House.

The Motohome's standardized equipment such as central air conditioning, a dishwasher, steel kitchen cabinets, and a thermostat above the bed in the master bedroom was uncommon for the time. The house also included numerous gadgets including a built-in radio and clock, toaster, percolator, iron, clothes washer, bathroom scale, and a library of how-to books on gardening, cooking, decorating, and child care. The house also came with several days groceries and other necessities.³³

³¹"New Materials and Methods in Country House Construction." Architectural Forum, March 1933, p. 232; and "An Exclusive Agency is established In Boston by American Houses, Inc." Architectural Forum, December 1933, pp. unknown.

³²History of Prefabrication, p. 47.

³³"Motohomes." The Commonweal, 12 April 1935, p.681; and "Machine for Living," Business Week, 15 December 1934, p. 8.

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An extensive search of 1930s literature supports the conclusion that the Motohome was likely the most extensively engineered prefabricated house sold in America. The only other residences of the period that are comparable in their innovative use of materials and inventive structural systems are experimental houses such as the Hobart steel houses in Ohio, the Dymaxion house, the Aluminaire house and the 1933 Chicago World's Fair houses of George Fred Keck. The Motohome is distinguished from this group both in the number of units erected and the wide geographical distribution of homes from New York state to Florida and as far west as Kansas.

ARCHITECTURAL SIGNIFICANCE

The Eggiman house is an outstanding example of the International Style in Wisconsin. Although Madison has a large number of International Style houses, many designed by nationally noted architects, the Eggiman House is one of the finer examples of the style in the city and the state as well.

The term "International Style" was coined by architect Philip Johnson in 1933 to describe the work of avant garde architects illustrated at a Museum of Modern Art Exhibition in 1933. The show depicted the work of European and American architects experimenting with a fundamental rethinking of architecture. Cultural Resource Management in Wisconsin notes the principles of the International Style defined by the MOMA exhibition as: "an emphasis on volume or space enclosed by thin planes or surfaces instead of a suggestion of mass and solidity; regularity and an underlying orderliness which is seen clearly before the outside surfaces are applied; and lastly, the avoidance of applied, surface decoration, and the dependence on the intrinsic qualities of the materials, technical perfection and excellent proportions."³⁴

The International Style was born in an age of austerity, both in Europe and America. Proponents of the International Style were social utopianists who believed that works of Modern architecture would improve the lives of their inhabitants and ultimately transform society as a whole. These architects attempted to incorporate

³⁴Barbara Wyatt ed., Cultural Resource Management in Wisconsin, vol. 2, Architecture Study Unit, p. 2-36.

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technological advances in machines, materials and processes into rational, economic, and efficient new forms. They felt such forms were necessary to express the needs and lifestyles and potential of the machine age.

The widespread attitude that better living would come tomorrow from advancing technology created a receptive climate for the transmission of European modernism to the states. Unlike European modernists who fixated on mass-housing schemes and large scale projects, American architect's interest in residential design remained rooted in the single family home. In Madison, the clients of these houses were largely young professionals. Most conspicuous were the large numbers of university faculty.

Madison attracted progressive architects such as the nationally recognized George Fred Keck, designer of the House of Tomorrow and the Crystal House at the Chicago World's Fair in 1933-34. His 1937 Morehouse House shows homage to DeStijl and Russian Constructivist avant-garde movements. However modernism was rooted not in style, but ideology, so other Wisconsin architects like Balch and Lippert and William Kaeser attempted to fuse the ideology of the International Style with regional building traditions.

Architects of the International Style experimented freely with materials and processes in an attempt to lower costs and increase utility and durability. The 1935 J. W. Gale House in Shorewood Hills was built with precast concrete panels, reputedly the first in the midwest. Poured concrete was used for both walls and floors in the 1940 Howard Haskins House in Madison.

Innovations were not limited to structural improvements alone. The International Style strove for an open floor plan and dispensed with walls in favor of movable partitions and flowing multi-use spaces. Built-in dividers and furniture helped reduce cost and increase functional efficiency. Long expanses of windows created uninterrupted vistas through interiors to the exterior landscape.

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During the height of the prefab craze of the depression, the International Style was the favored architectural imagery for the industry. As an article in *Literary Digest* stated:

To the man in the street, however, the prefabricated house is a square, modernistic, flat-roofed structure of austere design. This conception is justified because 'shoe-box' type of architecture lends itself naturally to precast panels which must be assembled in straight lines.³⁵

The Eggiman House is a pure example of the style as defined by the MOMA exhibit. The use of the steel frame and wall panel construction illustrates the enclosure of volume by thin planes similar to curtain wall construction in commercial construction. This type of construction is rare in International Style houses, which often are built with more conventional materials and only suggest such lightness of structure. The regularity and orderliness of its interior plan is clearly seen in the severe cubic form, modular design, and functional fenestration. The Eggiman House has no applied, surface decoration, and its aesthetic qualities depend entirely on the intrinsic qualities of the materials, construction detailing, proportions, and fenestration.

Comparative context

Of the known International Style houses in Wisconsin, only a handful achieve the technical sophistication of the Eggiman House. The 1937 Morehouse House in Madison, mentioned earlier, also has a severity of form and strong expression of structure and function in its design. The Dr. J. W. Gale house in Shorewood Hills, important for its unconventional construction, fails to achieve the lightness of structure and absence of ornamentation which makes the Eggiman House so unusually distinctive. Windway, near Kohler, WI (NRHP 1988), blends Prairie School and International Style elements, a distinctively Midwestern adaptation.

³⁵"Houses: Lack of Organization and Cost Retard Progress of Prefabricated Dwellings," Literary Digest, 23 January 1937, pp. 18-19.

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THE DEMISE OF THE MOTOHOME

A number of factors led to the failure of the Motohome to achieve a mass-market appeal. First and foremost, the concept of the house was then, and still is, enshrouded with sentimental meaning. Unlike other technological constructions, the home's traditional and familial connotations constrained widespread acceptance of any radical departure from conventional design. As McLaughlin himself noted:

It is in a sense unfortunate that the desire for shelter had to be one of man's most primitive instincts. A consequence of this has been the enshrouding of the house with various sentimentalities and prejudices which have kept it from becoming as comfortable, healthful, and happy a place to live in as the methods of our modern civilization might otherwise have accomplished.³⁶

The design imagery of the International Style was not appealing to a mass-market. The use of the style in the Motohome was an obvious attempt to use its high-tech appearance as symbolic packaging for the advanced design and construction. Architectural Historian David Gebhard stated the International Style was significant "not because it was functional, but because it symbolically expressed the machine. To understand, to appraise, and to criticize the International Style we must see it for what it was, namely a style, a fashion, a specific method of packaging."³⁷ It is ironic that although the style became synonymous with machine aesthetics, the architecture was rarely made or even dictated by the machine. The Motohome is a notable exception. Paradoxically, the need to differentiate prefabricated houses from run-of-the-mill construction required the use of distinctive imagery that was decidedly different from mainstream architectural tastes. It appears obvious from the lack of sales that the public considered the home too radical of a departure from conventional construction and aesthetics.

³⁶McLaughlin, Robert W. Jr. "What May We Expect of Modernism?" American Home, October 1932, p. 236.

³⁷David Gebhard and Harriette Van Breton, Kem Weber: The Moderne in Southern California 1920 through 1941, p. 6.

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Construction systems of these prefabricated experiments were predicated on large scale mass production. Such "high tech" buildings were inordinately expensive when produced on a small scale.³⁸ Consequently, an enormous number of sales were required to bring low per unit costs. The Motohome was overly loaded with equipment manufactured by its early sponsors, raising the base price. The moto-unit required servicing by specialized American Houses personnel, making it difficult to maintain. By 1936, the inevitability of mass-production seemed a pipe dream even to its strongest proponents, A spokesman for American Homes declared that prefabricated houses were "interesting-but still very much around the corner."³⁹

A 1942 study of the prefabrication industry stated that the "so called" Cape Cod had become the model for most prefabricators.⁴⁰ After World War II, there was a brief resurgence of interest in prefabrication, brought on by a severe post-war housing shortage. Several notable experiments relevant to Wisconsin were the Lustron house, a porcelainized enamel steel house, and the Consoweld, a similar house with a steel frame and interior and exterior plastic laminate walls manufactured by Consolidated Paper Company to house paper workers in Wisconsin Rapids.⁴¹

³⁸History of Prefabrication, p. 9.

³⁹"Men and Deeds." Architectural Forum, October 1936, p.74.

⁴⁰History of Prefabrication, p. 15.

⁴¹"Plastic Houses called Home," The Daily Tribune, (Wisconsin Rapids) 8 July 1989, p. 8B.

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The impact of machine production on the process of home building was not fully realized until post-World War II when housing was mass-produced on a large scale at Levitt-style suburbs.⁴² Prefabrication was eventually supplanted by the mobile home industry, which, adopting much of the innovation of the prefabrication industry, became "the most efficient building industry in the world."⁴³

Madison's Motohome is a significant symbol of a dynamic period of experimentation in the midst of the worst economic stagnation of the century. Although the house failed to achieve the success its promoters hoped for, it led the way for future attempts and many of its technologically innovative uses of materials and equipment have since become industry standards.

⁴²The Machine Age in America 1918-1941, 1986, p. 202.

⁴³Arthur D. Bernhardt. Building Tomorrow: the Mobile Home/Manufactured Housing Industry, p. ix.

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Verbal Boundary Description:

South Madison Subdivision, block 10, part lot 23

Boundary Justification:

This boundary encompasses the entire parcel historically associated with the property.

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PHOTOGRAPHIC DOCUMENTATION

The following applies to all photographs:

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Photos by Jim Draeger, July 1992 (Photos 1, 2, 3, 4, 6 & 7)
November 1993 (Photo 5)

Negatives at State Historical Society of Wisconsin

Photo 1 of 7 View looking West

Photo 2 of 7 View looking South

Photo 3 of 7 View looking Southwest

Photo 4 of 7 View looking Southwest

Photo 5 of 7 View looking Southeast

Photo 6 of 7 Detail of corner window, view looking Southwest

Photo 7 of 7 Noncontributing garage, view looking south