
CHERNER AND THE FHA: HOUSING RESEARCH IN THE 1950'S

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CONTEXT

In his 1949 State of the Union address, Harry Truman stated (emphasis added):

The housing shortage continues to be acute. As an immediate step, the Congress should enact the provisions for low-rent public housing, slum clearance, farm housing, and **housing research** which I have repeatedly recommended. . . .

Most of the houses we need will have to be built by private enterprise, without public subsidy. By producing too few rental units and too large a proportion of high-priced houses, the building industry is rapidly pricing itself out of the market. Building costs must be lowered.

The Government is now engaged in a campaign to induce all segments of the building industry to concentrate on the production of lower priced housing. Additional legislation to encourage such housing will be submitted.

The authority which I have requested, to allocate materials in short supply and to impose price ceilings on such materials, could be used, if found necessary, to channel more materials into homes large enough for family life at prices which wage earners can afford. ²

The Housing Acts of 1949 and 1954 instituted the research program that Truman promised, overseen by the Housing and Home Finance Agency (itself instituted in 1943) the predecessor of HUD. While previous legislation and governmental involvement in single family housing was aimed primarily at improving rural housing conditions, the 1949 Act provided two ways in which suburban and urban environments were affected: Title I of the Housing Act established what became known as “urban renewal”, whereby the federal and local governments purchased large tracts of land and handed them to private developers to build housing; and Title II, together with further legislation in 1954, furthered the authorization of the Federal Housing Administration’s ability to guarantee home mortgages.³

The combination of government assistance to homeowners and developers, and the impetus from Truman to research housing design and construction contributed to an environment rife with ideas about houses, new construction techniques and materials, and changing family structures, all well documented, and much of it well examined. Two fairly obscure examples of the outcomes of this environment are

seen in the work of Norman Cherner, a sole practitioner known more as an industrial and interior designer than an architect, and in the work and publications disseminated by and through the Small Homes Council at the University of Illinois, Champaign-Urbana.

Relative to the questions of housing research, low-cost housing and prefabrication during this time period, these questions will be considered: Who is doing the building? Who is sponsoring the experimental work or research? How is the work being marketed, or disseminated to the public? What are the implications of the variations?

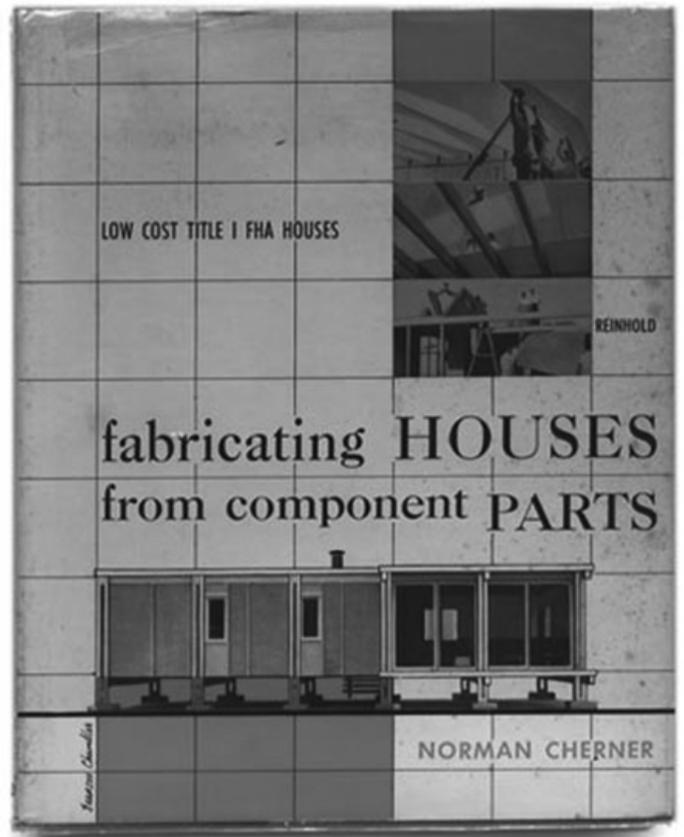


Figure 1. Cover: *Fabricating Houses from Component Parts*

NORMAN CHERNER

"If you can read a book, you can build a house." So says a May 27, 1957 New York Times review of Norman Cherner's book, *How to Build a House for \$6,000*. According to that review, a soft cover edition was published under the name *How to Build a House for \$6000*; a hard cover edition was aimed at professionals and design schools "under the more technical title of 'Fabricating a House from Component Parts'". It (was) expected to appeal to architects, builders and design schools".⁴ The dust jacket of the book featured the header "Low Cost Title I FHA Houses" on at least the hardcover first edition. It is never clear what the relationship with the FHA program is; since Title I applied to development of multiple homes, it can be assumed that this was an attempt to suggest a multiple home development, at the same time encouraging individuals to pursue homebuilding on their own.

The preface describes the history and current state of prefabrication in the United States, noting that "Prior to World War II, almost every material and every prefabricated building method used today was fully explored and developed . . . it is safe to say that that almost every important architect and designer, and every large manufacturing firm of building materials has been instrumental in bringing us closer to a low-cost house."⁵ He goes on to say that basic systems and components can be combined to make a wide variety of houses, but that "packaged" houses have a sameness of appearance, with only a few being sold to the truly average wage earner.

A visit to a "small Title I F.H.A. project", possibly a Levitt project, where one could purchase a 500 square foot, four room home on a quarter acre lot for \$7000, having cost the builder less than \$5000 to build, prompted Cherner to create an alternative. He illustrates the "unimaginative pattern" he found there with images of three houses, captioned "Typical Low Cost Title I F.H.A. Houses"⁶ The houses illustrated are indeed typical of the dominant developer houses of the day: gable roofed, Cape Cod and "ranch" style, without easy expansion possibilities, using wood standard frame construction: in short, taking advantage of few of the design or technical advances of the twentieth century, beyond, perhaps, Levitt's use of the Ford assembly line concept of mass production.

Cherner declares: "After further exploration, I became convinced that with some serious research, a larger, more livable and esthetic house could be built at the same price." His 700 square foot houses were thus a *LARGER* house, with expansion possibilities shown for each one. The cost effectiveness came in part from the efficiency of design, saving money on architect's fees by using the plans and ideas shown in the book, and from the labor and management contributions of the owner: "You will supply some carpentry and all painting labor and in instances where the house has a full basement, part of the masonry labor. Specialized skills, such as plumbing, heating and electrical work, will be let out to sub-contractors. It should be noted that there will be an added saving in construction because of the economies inherent in the design and construction of these houses."⁷

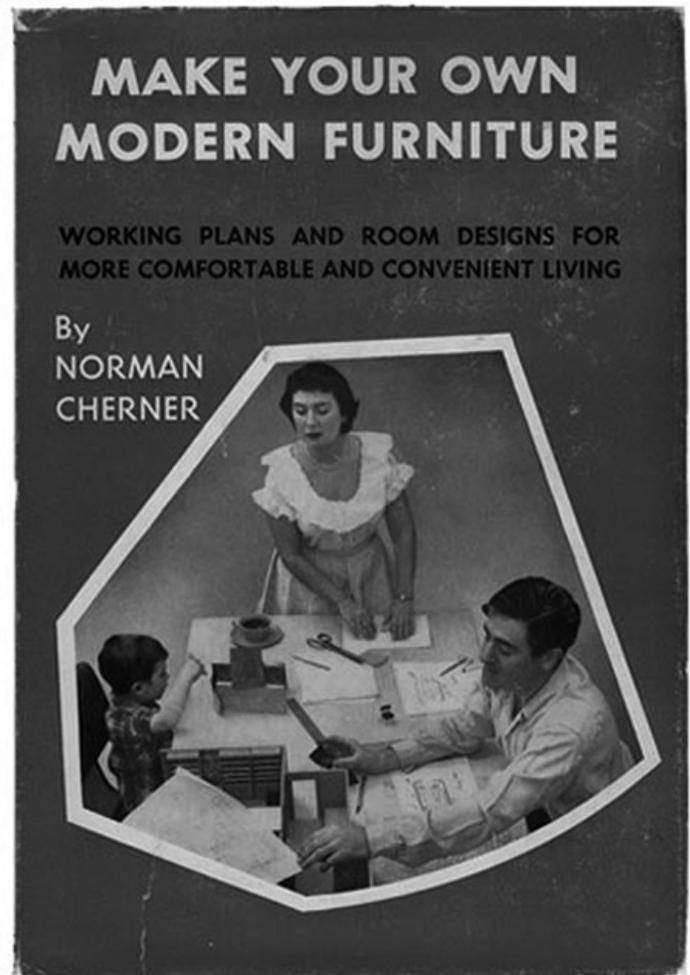


Figure 2. Cover: *Make Your Own Modern Furniture*

The "Do-it-yourself" aspect of the book was seen in Cherner's earlier publications, "Make your Own Modern Furniture" (1953) and "How to Build Children's Toys and Furniture" (1954). Those earlier publications echo the sensibilities of the day: cartoon-like illustrations similar to those produced by the Eames', with photographs of Cherner and his wife and son working together to improve their own home.

Following a section describing the important aspects of identifying a site and financing, the house projects are organized based on structural and constructional types, generally with three or four variations of houses shown: Panel Construction; Bent Construction; Girder Construction; Masonry and Foundation Construction; and Quonset Construction.

The final third of the book is devoted to descriptions, if not advertisements, of products—the "components" of the title, to be purchased and assembled in ways that Cherner hoped could avoid the sameness he identified in the developer houses of the F.H.A.

projects cited in his Prologue. The relationship of all of this to the Case Study House program, and specifically the Eames' strategy of building with off-the-shelf components, is clear. The Case Study Program, sponsored and initiated by John Entenza and his "Arts and Architecture" magazine, had begun in 1945.⁸

This project too had a relationship to a magazine, though a very different one. Prior to publication of the book, *Woman's Day* magazine had built two of the homes, Bent House 5, and Foundation House 12. The *Times* book review noted that the built houses stayed within the \$6000 budget claimed by the book. *Woman's Day* is a magazine that was started in 1931 as an advertising circular, produced and handed out for free by A & P Supermarkets to promote its products. It was expanded in 1937 and published by a wholly owned subsidiary of A & P, and had a circulation of 4,000,000 by 1958, when it was sold to Fawcett publications.⁹ By comparison, *Arts and Architecture* had 12,500 paid subscribers in 1967, up from 8,500 in 1962.¹⁰

The magazine had a substantial do-it-yourself agenda, featuring furniture projects as well as clothing and household items to be made by homemakers and their families.

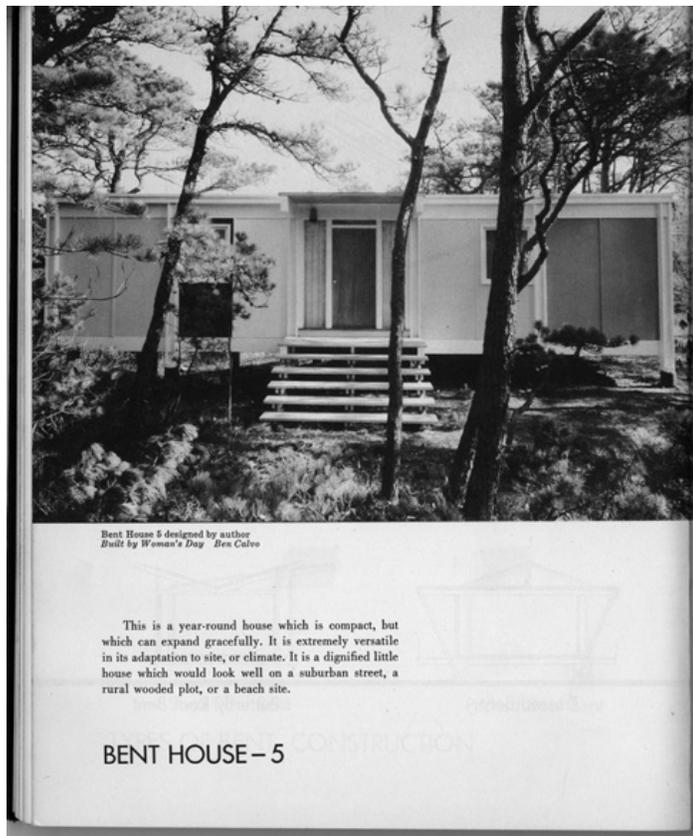


Figure 3. Bent House 5, p. 62 from *Fabricating Houses from Component Parts*, built by *Woman's Day* magazine.

As noted on the Cherner chair company's website, one of Cherner's houses was exhibited in a 1958 trade show in Vienna, apparently with

the sponsorship of the FHA.¹¹ It appears to be a version of "Bent" construction type. That 500 square foot house was disassembled, and reconstituted with added living space and decks, as Cherner's own house in Norwalk, Connecticut. In 1964, the *New York Times* featured images of the house with a second story added to it; evidence of the expandability of Cherner's models.¹² The house and the development it is a part of, Village Creek, are now on the National Register of Historic Places; it sits among a catalogue of prefabricated examples of its day; Techbuilt, Lustron, "K House", and Fabricators, Inc. as well as a number of custom designed modern homes.

Was this an F.H.A. associated development? In their 1949 prospectus, the original members of the community stated, "But above all else we wanted a different type of community with a completely democratic character – no discrimination because of race, color, creed or politics."¹³ The FHA did not underwrite mortgages in racially mixed communities until after 1950, and even then the practice continued in developments like those of William Levitt. The local Connecticut FHA office refused to guarantee loans for Village Creek, which had a local reputation, according to the National Historic Register application, as a communist enclave. Clearly it was not an F.H.A Title I or Title II development.

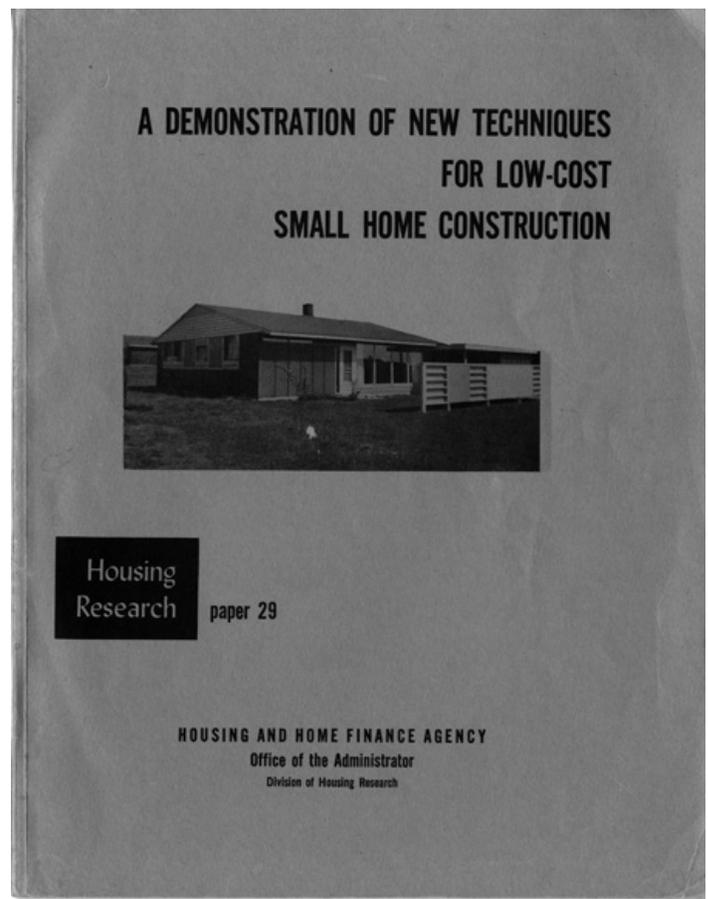


Figure 4. Cover: *Housing Research Paper 29: A Demonstration of New Techniques for Low-Cost Small Home Construction*.

SMALL HOMES COUNCIL

In contrast to Cherner's solo attempt to develop new methods of building and to interface with both the public and private sectors in housing in the post war 1940's and 1950's, the Small Homes Council at the University of Illinois at Champaign-Urbana was established in 1944 at the request of the president of the university to "consider the role of the university in meeting the demand for housing in the United States."¹⁴ As a research group they built demonstration homes to test everything from construction technologies such as pre-fabricated roof trusses and wall panels to the development of affordable residential air-conditioning systems and efficiency of kitchens. Though they have self-published much of their research, they also had a close relationship with the Housing and Home Finance Agency's Division of Housing Research, contributing publications that document in great detail the construction and cost of several houses.¹⁵ The authors of the research papers are also cited as being the builders of the houses, "at their own expense", with costs recovered after sale of the houses.



FIGURE 55.—Wall sections are preassembled on the floor slab and are then tipped into place.

| COMPONENT 22.—GARAGES (HOUSE A)—Continued | | | | | COMPONENT 22.—GARAGES (HOUSE A)—Continued | | | | | | |
|---|-------------|-------------------------|-----------------------------|-----------------------|---|--------------------------------------|----------------------------|------------------------|-----------------------------|-----------------------|--------------|
| B.—WALLS | | 2.—NAILING OF SHEATHING | | | B.—WALLS | | 2.—FLASHING SILLS AND TRIM | | | | |
| Labor | Date | Number of workers | Total hours worked | Hourly rate | Cost | Labor | Date | Number of workers | Total hours worked | Hourly rate | Cost |
| Carpenter, Ironman..... | 7-2 | 1 | 34 | \$3.75 | \$1.28 | Carpenter, skilled..... | 7-2 | 2 | 1 | \$2.50 | \$2.50 |
| Carpenter, skilled..... | 7-2 | 1 | 14 | 2.50 | 1.40 | Carpenter, Ironman..... | 7-4 | 1 | 14 | 2.75 | 4.81 |
| Laborer, unskilled..... | 7-2 | 1 | 34 | 1.50 | 4.80 | Carpenter, skilled..... | 7-4 | 1 | 14 | 2.50 | 3.50 |
| Carpenter, Ironman..... | 7-2 | 1 | 34 | 2.75 | 9.28 | | | | | | |
| Carpenter, skilled..... | 7-2 | 2 | 1 | 2.50 | 2.50 | | | | | | |
| Dr..... | 7-4 | 2 | 1 | 2.50 | 2.50 | | | | | | |
| Laborer, unskilled..... | 7-4 | 1 | 14 | 1.40 | 4.80 | | | | | | |
| Total labor..... | | | | | 9.87 | | | | | | 7.94 |
| Material | Date | Amount in units | Amount used per unit | Price per unit | Cost | Material | Date | Amount in units | Amount used per unit | Price per unit | Cost |
| 4' x 8' x 1/2" sheathing..... | 7-2 | 15 sheets | 490 sq. ft. | \$5.12 | \$2.80 | 1" x 4" x 12' No. 1 W. P..... | 7-2 | 4 pcs. | 6.22 bd. ft. | \$9.20 | \$2.66 |
| | | | | | 27.88 | 1" x 8" x 4' C. V. G. Br..... | 7-2 | 4 pcs. | 21 bd. ft. | 34 | 1.34 |
| | | | | | 27.88 | 1" x 6" x 4' C. V. G. Br..... | 7-2 | 4 pcs. | 18 bd. ft. | 34 | 1.44 |
| | | | | | 47.47 | 1" x 6" No. 1 W. P..... | 7-2 | 1 pc. | 4 bd. ft. | 36 | 1.44 |
| | | | | | 47.47 | Total material..... | | | | | 25.22 |
| | | | | | 47.47 | Total labor and material..... | | | | | 33.16 |

Figure 5. Page 52, "New techniques": Tilt-up wall and examples of labor and cost data.

The techniques described in Housing Research paper no. 29, *A Demonstration of New Techniques for Low-cost Small Home Construction*, include many that have become ubiquitous in low-

cost building such as those employed by groups like Habitat for Humanity,¹⁶ such as panelized wall systems and pre-fabricated lightweight roof trusses, made on or off site and easily tipped up into place with relatively few workers.

Though there is an interest in modularity, there is almost nothing besides appliances that is actually manufactured by other parties. Windows, for example, though commercially available by the 1950's as components and shown in Cherner's book as components to be purchased and installed, are assembled on site in these estimates.

The cost summaries for the two houses documented total \$12,330.76 and \$12,074.58, respectively for houses of about 1100 sq. ft., plus a garage. Very detailed descriptions of labor/time studies as well as cost of materials and assessments of waste are denoted. Appendices include detailed descriptions of design issues in terms of social, technological and economic changes, with comparisons of conventional and open planning. One of the construction techniques critical to the open planning that is promoted is described as "open-room construction": essentially the use of clear spanning trusses to allow flexibility and efficiency in interior partition layouts and variations house to house. This, too, is common in many current Habitat for Humanity houses.

The research is directed at builders and developers more primarily than the general public, in terms of its content as well as the publishing venue.

CONCLUSION

Returning to the questions posed in the abstract: How were these works presented to and received by the public, what impact did they have on the design and construction of low-cost single family homes in the 1950's, and what was the nature of architectural research and testing in the post-World War II environment?

The Housing Research papers were for sale through the government printing office and certainly anyone could seek them out and purchase them. The difference between that and the possibility of seeing *Woman's Day* or the *New York Times*, and seeking out Norman Cherner's books seems to give the benefit to Cherner in terms of exposure. Nonetheless, the techniques described in the Housing Research paper have proliferated dramatically. One builder might have built thousands of homes, while one homeowner might build only one. Cherner was one of many architects with small practices who sustained his own family through a practice that seemed integrated with his life: less a businessman perhaps than an artist. His substantial experience with industrial arts and design contributed to his reconsideration of the basic construction and structure of the small houses. Although associated with some well-known institutions (Columbia University and the Museum of Modern Art) he did not come to his work in housing design through an institution of the size and scope of Illinois, nor was he as intimately connected with the mechanisms of the federal government's efforts

to support housing research, in spite of the fact that his own house had begun as one sponsored by the Housing and Home Finance Agency for the International Trade Fair in Vienna.

The comparison here is between vastly different sets of work and ideas: institutional and individual, expert and tinkerer. Both Cherner's work and the work of the Small Homes Council offered important advancements in the ways that houses had been conceived of and made at a time when many houses were needed and how one might finance one was changing.

The role of the Federal government was apparently critical in both cases, supporting publication of the research at least for the Small Homes Council, and possibly the research itself, though no documentation has been discovered to confirm that. Similarly, there is no concrete evidence of the nature of the support Cherner received for the initial building of the house shown in Vienna that eventually became his own home, though it seems certain that the government did support the exhibition of the project in some way.

Truman's State of the Union address called for public and private investment to stem the housing shortage. That much at least is demonstrated in these two projects.

ENDNOTES

1. Cherner Chair Company, http://www.chernerchair.com/en/info_about_designers.php. Accessed 7/12/12
2. American Presidency Project: Harry S. Truman: Annual Message to the Congress on the State of the Union. <http://www.presidency.ucsb.edu/ws/index.php?pid=13293#ixzz208eQqmLU>
3. See, for example, Martinez, Sylvia C., "The Housing Act of 1949: Its Place in the Realization of the American Dream of Home Ownership", in *Housing Policy Debate*, Volume 11, Issue 2; or http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/fhahistory
4. Norman Cherner, *Fabricating Houses From Component Parts*, [How to Build a House for \$6000] (New York: Reinhold, 1957)
5. Cherner, *Fabricating Houses*, 12
6. Cherner, *Fabricating Houses*, 13
7. Cherner, *Fabricating Houses*, 15
8. Esther McCoy, *Case Study Houses 1945-1962* (Santa Monica, CA: Hennessy and Ingalls, 1977) First edition published under title: *Modern California Houses*, 1962.
9. Woman's Day, http://en.wikipedia.org/wiki/Woman%27s_Day (accessed 7/13/2012). Woman's day does not appear to have been catalogued, and only issues up to 1955 have been available to the author of this paper. One assumes that Cherner's houses were published in the magazine, but the evidence is not in hand.
10. about arts and architecture: <http://www.artsandarchitecture.com/about.html> (accessed 7/12/2012)
11. National Register of Historic Places Registration Form, submitted by Tod Bryant, 5/5/2010. <http://www.heritageresourcesct.com/wp-content/uploads/VC-NRHP-final2.pdf>, p. 19
12. George O'Brien, "A House Grows—Up", *New York Times*, June 28, 1964.
13. National Register of Historic Places Registration Form, submitted by Tod Bryant, 5/5/2010. <http://www.heritageresourcesct.com/wp-content/uploads/VC-NRHP-final2.pdf> According to this form, the Cherner family lived in Village Creek until 1968, and the house was again substantially changed by Cherner in the 1970's.
14. Building Research Council. <http://brc.arch.illinois.edu/history.htm> accessed July 13, 2012. The Small Homes Council is now called the Building Research Council, and is housed in the School of Architecture
15. Harrell, Raymond H. and John T. Lendrum. *A Demonstration of Low-cost Small Home Construction*, Housing research paper, no. 24. Washington D.C.: U.S. Government Printing Office, April 1954; and *A Demonstration of New techniques for Low-cost Small Home Construction*, Housing research paper, no. 29. Others in the series are purely technical, including such topics as : "Moisture Migration from the Ground", and "Design Data for Some Reinforced Lightweight Aggregate Concretes".
16. Larry Haun, *Habitat for Humanity: How to Build a House (Newtown, CT. Taunton Press, 2008)*