

PLANNING FOR REMODELING

THE HOME



Small Homes Council-Building Research Council
University of Illinois at Urbana-Champaign

Remodeling is becoming more popular. Americans are spending billions of dollars on remodeling projects each year. Homeowners need to think through their ideas and plan carefully. Remodeling is an investment of time and money. Remodeling will affect the value of the home as well as the cost to own and operate it.

Before lifting a hammer or signing a contract, consider whether it will be better to remodel to get the space and/or features you need or whether it will be easier to purchase a new home. Some remodeling changes do not pay and could actually detract from the value of your home or price your home out of the neighborhood in which it is located. Careful planning can save you money, frustration, and problems in the future.

This circular is meant to be a starting point. It raises many of the questions you should consider as you are thinking about remodeling your home.

What is Remodeling?

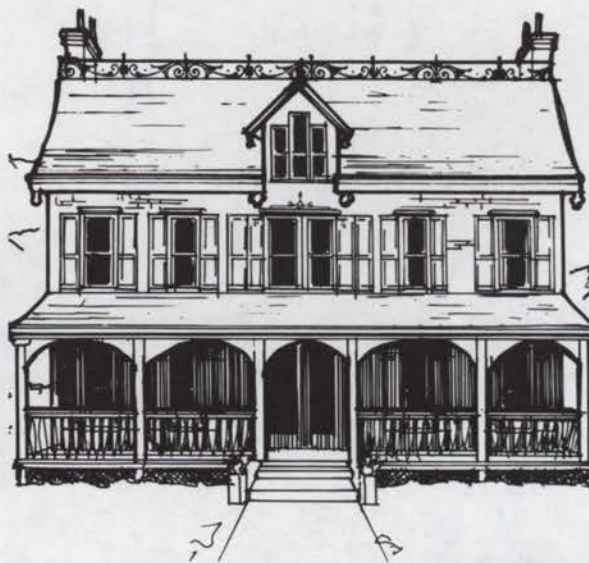
What type of improvement are you thinking about making? Is it maintenance, remodeling, or retrofitting? There are differences between maintenance, remodeling, and retrofitting – philosophical differences and financial differences. Knowing what these terms mean will help you define the extent and kind of work to undertake.

Roofing, painting, and plumbing repairs are *maintenance* repairs that are made to counteract normal wear and tear on a home. They do not substantially increase the value of a home. Instead, they bring a home up to a level that buyers expect in the first place.

Remodeling, on the other hand, generally increases the value of a home and increases livability beyond that of simple maintenance and repair.

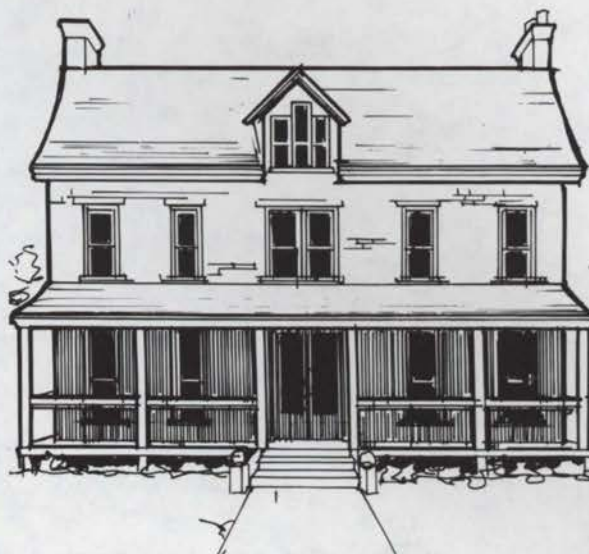
There are many names for remodeling, and each has its own meaning. *Restoration* refers to restoring a home to its original character. This may mean that "improvements" made by previous owners will need to be removed. Restoration is challenging, and it is the most expensive type of remodeling. *Preservation* means stabilizing the

building in its current condition. Rather than returning the building to its "original condition" by restoring it, preservation tries to make sure that the building does not deteriorate further. Maintenance to keep the building in good repair, while leaving it essentially as it is, is preservation. *Rehabilitation* involves updating existing features, such as baths and kitchens.



Restoration means that a home is restored to its original appearance. As pictured above, original architectural detailing – shutters, porches, windows, and roof cresting – have all been restored.

The home shown below has been preserved. Maintenance and some moderate rehabilitation were the only changes made.



COUNCIL NOTES

Volume 8, Number 3

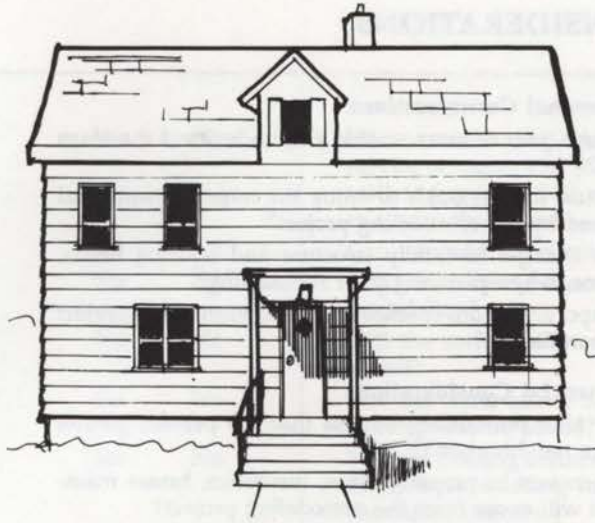
© 1987 by The Board of Trustees of the University of Illinois

Material in this publication by:

Prof. Joseph L. Wysocki
Extension Housing Specialist, UIUC

Illustrations: Donna Milner Editors: Henry R. Spies
Mark Pedersen Marylee MacDonald

All rights reserved. No part of this publication may be reproduced in any form without permission in writing from the publisher. Published by the Small Homes Council-Building Research Council, University of Illinois at Urbana-Champaign, One East Saint Mary's Road, Champaign, Illinois 61820. This publication is one of a series written for the homeowner. A complete list of publications is available upon request.



The owners of this home wanted a "modern, energy-efficient home". Sometimes, retrofitting aimed at "saving energy" can destroy the home's best architectural features. Be careful to consider the final appearance of the home in any type of remodeling.

Retrofitting is a term used for improvements which are made to existing dwellings. The term is often used for improvements that make the home more energy efficient.

One reason for undertaking a remodeling project is to gain more living space in the home. Conversions of existing areas or additions to the home are the two approaches used. A conversion might involve transforming an attic space into bedrooms or converting a garage or porch into a living center. Conversions usually cost less because they do not start from scratch. Part or all of the space (foundations, sidewalls and roof) are already in place. (Be cautious in planning attic conversions, however. Attic floors are usually designed to carry only lightweight storage. Make sure the floor can carry additional weight.) Additions usually involve adding space to the exterior of a home.

One special type of conversion is *adaptive reuse*. A possible adaptive reuse is a barn or a church converted into a house.

Pros and Cons

Advantages of remodeling your home include the following:

- Neighborhood and school ties can be maintained if you stay in your present home.
- You can avoid the substantial costs involved in selling, buying, and moving into a new house.
- Some older homes provide more space, at approximately the same cost, as a new house.
- If you purchased a home several years ago when mortgage interest rates were lower, you may not want to trade in the mortgage for today's higher interest rates.

- If you have lived in the house for a while, you know its good and bad qualities.
- You can do the work yourself while living in your home; and, you can work at your own pace.
- Older homes have details that would be too expensive to put in new houses (oak trim, wood floors, etc.)
- Mature trees in older neighborhoods are an advantage. Existing landscaping can save one major expense of new home sites.

You will need to decide if it is better to move or to use the money to remodel your present home. The money you spend changing houses might pay for many improvements in your present home.

Disadvantages of remodeling should be considered carefully:

- The location of your home may be a disadvantage as well as an advantage. Carefully look at the neighborhood to be sure that properties are not deteriorating or that the area has adequate residential zoning protection.
- The house may require significant structural changes that mean the remodel cannot be done for a price that is cost-effective.
- You may be dissatisfied with the results of the remodel. (Good preliminary planning can be helpful here.)
- Remodeling is complex, and costs can run higher than expected. (In fact, costs are usually higher than comparable space in building a new house because of unseen defects.) Remodeling may take longer than anticipated.
- Your real estate taxes, insurance, and utilities may increase.
- The dust, dirt, clutter, and inconveniences associated with remodeling may put a significant stress on family life.
- There is the danger of financial overimprovement.

Remodeling can be rewarding; but, you need to plan ahead before you launch into a major project.

Remodeling Checklist

There are many factors to consider when planning to remodel a home. The following checklist is planned to help you review these factors. Use the checklist to review all the important considerations. If you circle mainly *No's*, then you may need to reconsider your remodeling project.

REMODELING CONSIDERATIONS

Answer	Personal Considerations
Yes No	Have you lived in your house a year or more so that you understand the ways it does not meet your needs?
Yes No	Will you be living in the house long enough to enjoy the improvements and to justify the disruption caused by the remodeling project?
Yes No	Have you considered future changes in family structure and housing needs, such as children leaving home, when planning your remodeling?
Yes No	Have you considered the temporary inconvenience and disruption of the project and planned how you will handle this?
	Financial Considerations
Yes No	Will the value of the house after remodeling be less than 20 percent greater than the average home in the neighborhood?
Yes No	Have you considered any increases in property taxes, insurance, house maintenance and utility costs that will occur from the remodeling project?
Yes No	Will your monthly housing costs after remodeling, including any loan payments, be no more than 25 to 35 percent of your income?
Yes No	Have you considered the effect on the resale value of your home, and if you will be able to get a return on your investment in the remodeling project?
Yes No	Have you shopped around for the best financing source?
	Location & Lot Considerations
Yes No	Is the house conveniently located – near schools, parks, shopping, church, or your place of work?
Yes No	Is the neighborhood attractive, well maintained, and developing in a positive direction?
Yes No	Is the neighborhood free from threat of flooding?
Yes No	Is the neighborhood zoned only for residential use?
Yes No	Is the lot properly graded, so water will drain away from the house?
Yes No	Is the house oriented so maximum benefit and protection is provided from sunlight, wind, rain, and snow?
	Foundation and Structural Considerations
Yes No	Does the alignment of the foundation appear to be straight and true?
Yes No	Is the foundation free from large cracks and signs of deterioration?
Yes No	If the house has a basement, is it free from water streaks or marks on floors and walls, or other signs of moisture problems?
Yes No	Are floors sturdy and level?
Yes No	Are your remodeling plans feasible with respect to load-bearing walls and other aspects of your house's construction?
Yes No	Are walls and ceilings free from cracks, bulges, and damp spots?
Yes No	Are the exterior walls free from excessive paint blistering and cracking, which is a possible sign of a moisture problem in the wall?
Yes No	Does the house have adequate attic and eave ventilation?
Yes No	Is the roof free from sagging or bowed surfaces? Will the roof need to be replaced soon (a major expense)?
Yes No	Are the flashings around chimneys and dormers in good repair and free of rust? Do gutters and downspouts carry water away from the house?
Yes No	Is the house free of termites, dry rot, and other decay or damage?
Yes No	Is your house insulated to meet the recommended R-values for your area? (This work can be included in the remodeling plans.)

Value of Home Improvement

The question most often asked by homeowners wanting to remodel is this: Will it pay to remodel? This question really depends on the individual. For example, is remodeling a practical solution to

a problem? Does the remodeling provide for a more comfortable way of life, and will this remodeling lift the emotions of the occupants? These intangible benefits might outweigh the cost of remodeling for some homeowners.

		Utility Considerations
Yes	No	Does your electrical wiring meet the following minimum standards: 100-ampere service or more; 8 or more 110-volt circuits; at least one 110-volt outlet on each wall and enough 220-volt outlets for major appliances? (If not, you may need to rewire the house.)
Yes	No	Can you add additional circuits, if needed?
Yes	No	Will the water pressure be adequate if new plumbing facilities are added in remodeling?
Yes	No	Will the source of water be adequate after remodeling, especially if it is from a well?
Yes	No	Will the water heater be satisfactory after remodeling, especially if facilities for laundry will be added?
Yes	No	Will the existing method of sewage disposal be adequate, especially if a garbage disposer or washing machine is to be added in remodeling? (Septic systems should be checked.)
Yes	No	Will the present method of heating/air conditioning be adequate and efficient after improvements, or will supplementary units be needed?
		Design Considerations
Yes	No	Will the remodeling positively affect the traffic patterns and circulation within the home?
Yes	No	Have you considered how your furnishings and possessions will be arranged after remodeling?
Yes	No	If the remodeling will alter the exterior of your home, have you planned for compatibility in architectural style and materials?
Yes	No	Have you considered how your choices of color and materials used in remodeling will blend with the rest of the home?
Yes	No	Do your remodeling plans satisfy all applicable building codes, zoning ordinances, or restrictive covenants in your deed?
		Hiring a Contractor
Yes	No	Have you contacted at least three reliable contractors for bids before making a choice?
Yes	No	Have you selected a contractor with a solid reputation who provided references?
Yes	No	Do you have a written agreement covering: a full description of the work to be done; materials to be used; acceptance of liability and agreement to obtain needed permits and meet codes on the part of the contractor; a time frame for the project; payment schedule; agreement which frees you from liens against the contractor; and a warranty of work?
Yes	No	Have you agreed that the final payment to the contractor will not be made until the work is satisfactorily completed?
Yes	No	Have the contractor and you agreed on what parts of the project you will do yourself?
		Do-It-Yourself
Yes	No	If you plan to do much of the work yourself, do you fully understand the extent of the job and all the steps involved?
Yes	No	Can you do the work or learn to do it yourself?
Yes	No	Do you have the tools or can you borrow them?
Yes	No	Do you have some place to go for advice if you get stuck in the middle of the project?
Yes	No	Do you know what materials are needed?
Yes	No	Can you buy them at a reasonable cost?
Yes	No	Do you have the time to complete the project?

Determining whether the remodel will add to the value of the house is also an important consideration. For example, a basement made into a recreation room or a family room addition could provide the owner with a recovery of 70-80 percent

when the house is sold. Knowing the costs for typical remodeling projects can help you gauge whether you can recover the cost if you ever need to sell the home.

Potential Returns

The chart can help to provide some idea of the cost of typical home improvements. Investing in any of the "big three" improvements may return 50-75 percent of the initial investment or even more. Much depends on how well a job is executed, how it coordinates with the rest of the house, and how the improved house relates in price to others in the neighborhood. It should be noted though that if a homeowner spends more than 10 percent of the value of the house in the kitchen, there will not be a commensurate increase in the resale value of the house. Second bathrooms, third bedrooms and family rooms are almost always good investments. It is usually less costly to convert existing space rather than adding new space. However, if a garage is lost for a bedroom or family room, it really is not a good investment. Future buyers may feel a garage is an essential feature.

Energy-conserving improvements will aid in supporting the resale value of a house, as long as the homeowner keeps proportion in mind. For example, if a homeowner adds a \$15,000 solar collector to a \$40,000 home, the home does not automatically become worth \$55,000. If the homeowner plans to sell the house, a fireplace provides a good selling point, yet it does not provide a good financial return.

Some energy improvements will pay for themselves in energy savings. Improved attic and wall insulation, storm windows, and weatherstripping are all relatively low-cost improvements that will provide an immediate return. Even though these improvements are "hidden" improvements that will not be seen by a prospective buyer, the owner can use low power bills to prove the investment in energy savings was effective.

COSTS FOR IMPROVEMENTS

The Big Three

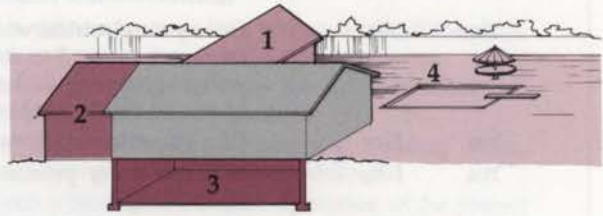
Kitchen	\$1,500 - \$25,000
Bathroom	\$2,000 - \$5,000
Room Additions	\$10,000 - \$25,000

Energy Improvements

Insulation	\$500 - \$2,000
Storm Windows	\$1,000 - \$5,000
Air Conditioning	\$1,500 - \$15,000
Fireplace/Wood Stove	\$500 - \$5,000
Solar/Wind Power, Greenhouse	\$3,000 - \$25,000

Outdoor Improvements

Swimming Pool	\$2,500 - \$25,000
Hot Tub	\$1,000 - \$5,000
Tennis Court	\$10,000 - \$20,000
Special Landscaping	\$2,500 - \$10,000



Resale return on various types of remodeling include the following: 1) Adding a room - 50-70% 2) Kitchen and bath - 50-70% 3) Converting a basement to a family room - 70-80% 4) Outdoor facilities - 25%.

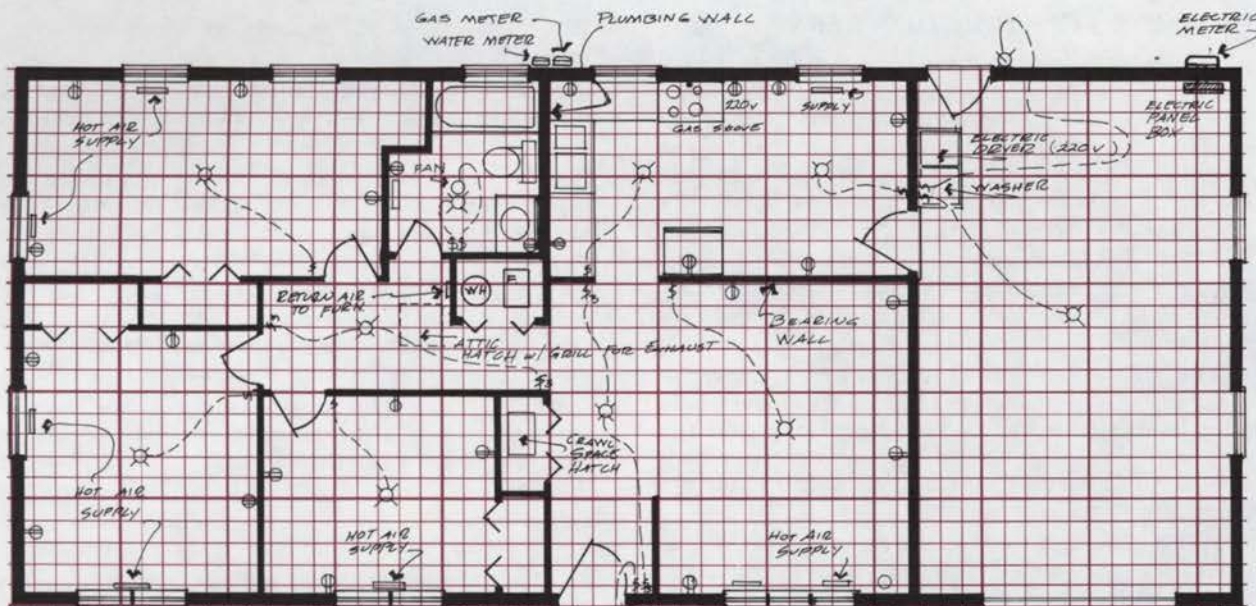
Outdoor improvements will not provide any more than 25 percent resale return unless the house is in a particular area where these outdoor improvements are expected. Keep in mind that what some people consider a plus in a house, others, who might be looking to buy the house, consider it negatively. Outdoor improvements should be considered only for the enjoyment they provide the family.

The Design Process

After you decide to remodel, you need to think through the design process. Consolidate ideas about the whole project. Collect pictures, talk to friends who have remodeled, visit model homes and builder/supplier showrooms, talk with your county extension home economist, and contact builders, architects, or designers.



Visit dealers' showrooms for ideas.



Using graph paper with squares of $\frac{1}{4}'' = 1'$, draw the house as it is. Show light fixtures, switches, outlets, location of plumbing, utilities, and room arrangements.

Make rough sketches. Measure the house and put it down on paper. Indicate where plumbing, electrical and gas lines are now. Show locations of doors, windows, heat registers, lighting fixtures, chimneys, fireplaces, furnace, electrical service entrance, and electrical outlets; use $\frac{1}{4}$ -inch graph paper, and let one square equal one foot. Use scale cutouts of furniture and appliances to help with room arrangements.

Seek professional advice. Contact an architect, engineer, contractor, or home builder to help you work out the final plan from your rough sketches. Discuss structural soundness, design aspects, and a cost estimate for the project. Learn code requirements and other possible obstacles from local building inspectors.

Go shopping. Investigate the many building products and materials in the market, and evaluate the range of prices, colors, and the varying degrees of durability and care required. Take time to visit builders' and suppliers' showrooms, and study magazines to learn about new products. Visit home shows.

Develop a final set of plans. After doing your homework, you will be more familiar with the choices of materials and with possible designs. Consider making a cardboard model if you are planning an addition on your present house. With a model, you will be able to visualize the completed project.

Much of the preliminary work must be done by you, even if you decide to hire a professional to make the plans final. Whether you can make all the decisions that need attention yourself will

depend upon your abilities and experience. Your needs and preferences are one of the most important aspects in the planning process, and professionals will rely on what you tell them you want.

Design is more than just appearance – it also entails functional and structural considerations. When you need to put your final plans on paper, or when you feel stuck in the process and want design or structural advice, you should consult a professional. A draftsman, building contractor, architect, or engineer can put your ideas on paper. Some structural design can be handled by a good contractor; however, more complicated restructuring may require the services of a structural engineer or an architect.

The fees paid to professionals for drawing plans vary, and the differences should be investigated. In general, an architect costs more than a draftsman, but if your project entails extensive structural or design changes, the money may be well spent. An architect is also valuable in helping resolve design issues, while a structural engineer might be needed when there are major structural changes. Get estimates from several sources before deciding.

As you make all these decisions, keep the whole family involved in the project, gathering ideas and discussing desired results. Plan for enough time to develop and complete the project – it always takes longer than you think and costs more than you originally anticipate. Proper planning and consideration of possible problems will help you prepare a successful strategy for remodeling your home.

COMMON CONSTRUCTION TERMS

BALLOON FRAMING: A system of framing 2-story wooden buildings, mainly used before 1945; all vertical structural elements of the exterior bearing walls and partitions consist of single studs which extend the full height of the frame, from the top of the soleplate to the top plate of the wall; all floor joists are fastened by nails to studs, they may rest on inset ledger strips.

BATTEN: A narrow strip of wood applied to cover a joint along the edges of two parallel boards in the same plane. "Board and Batten" siding is usually a vertical siding.

BEAM: One of the principal horizontal timbers or metal supports of a building; a structural member whose prime function is to carry vertical loads. Joists or rafters may rest or "bear" on a beam. The beam transfers loads from these members to the bearing walls or columns on which it rests.

CLAPBOARD: A wood siding commonly used as an exterior covering on a building of frame construction; applied horizontally and overlapped, with the wood's grain running lengthwise; thicker along the lower edge than along the upper.

DORMER WINDOW: A vertical window which projects from a sloping roof, placed in a small gable. The name derives from the fact that it usually serves sleeping quarters.

DOUBLE-HUNG WINDOW: A window having two vertically sliding sashes, each closing a different part of the window.

EAVES: The lower edge of a sloping roof; that part of a roof of a building which projects beyond the wall.

FLASHING: A thin material, impervious to water, placed in construction (e.g., in mortar joints and through air spaces in masonry) to prevent water penetration and/or provide water drainage, especially between a roof and wall, and over exterior door openings and windows.

For more information on current housing topics, subscribe to "Council Notes," a quarterly series from the University of Illinois Small Homes Council-Building Research Council.

SPECIAL INTRODUCTORY PRICE!

2 years for \$5.00

Call and order today!

1 - 800 - 336 - 0616

Visa and MasterCard accepted

FOUNDATION: The support on which a structure rests.

GABLE: The vertical triangular portion of the end of a building having a double-sloping roof, from the level of the cornice or eaves to the ridge of the roof.

JOIST: One of a series of closely spaced, parallel members of wood, reinforced concrete, or steel used to support floor and ceiling loads, and supported in turn by larger beams, girders, or bearing walls.

LATH: Any of a number of thin narrow strips of wood, nailed to rafters, ceiling joists, wall studs, etc., to make a groundwork or key for slates, tiles, plastering, etc., or in constructing light frameworks, as trellises.

LINTEL: A horizontal structural member over an opening (such as a door or window) which carries the weight of the wall above it; usually of steel, stone, or wood.

LOAD-BEARING WALL: A wall capable of supporting an imposed load in addition to its own weight.

PLATFORM (WESTERN) FRAMING: Most common construction used today, it is a system of house construction that uses wood studs 1-story high, finished with a platform consisting of the underflooring for the next story.

POST and BEAM CONSTRUCTION: A type of construction characterized by the use of vertical columns (posts) and a horizontal beam (lintel) to carry a load over an opening - in contrast to systems employing arches or vaults.

RAFTER: One of a series of closely spaced inclined framing members extending from the eave to the ridge of the roof. All the rafters together form the frame to which the roof sheathing and roofing materials are attached. Rafters support the weight of roofing material as well as all snow and wind loads.

R-VALUES: The measurement of the insulating qualities of different materials. The higher the R-value, the more insulation provided.

SHEATHING: The covering (usually wood boards, plywood, wallboards, or other panel products) placed over exterior studding or rafters of a building.

STUD: One of a series of small-dimension wood members closely spaced (16" to 24" apart) which form the structure of a wall.

SUBFLOOR: A rough floor, laid on joists, which serves as a base for the finished floor.

TRUSS: An engineered structure, made of light-weight members, fastened with connecting plates to give extra rigidity. Wood trusses may be used instead of rafters and ceiling joists in attics.

Sources for Further Information

Cooperative Extension Service. Offices are listed in the white pages of your phone book.

The Old-House Journal emphasizes renovating older homes.

Several popular publications available at newsstands or from your local library include *Practical Homeowner*, *Home*, *Fine Homebuilding* and *Handyman*.