

Designing a Steak House

on a Hamburger Budget



by Chuck Silver

How to help your client strike a balance between bare-bones shelter and lavish luxury

Every house has a budget. One customer's garage may cost more than another's house, but each has a budget. When I sit down with clients to begin the design process, I need to know the budget to determine whether their desires are realistic.

It's the customers' job, of course, to state their needs and what they can spend. But the issue is clear to me as the designer: Either they state their needs and desires, and I tell them what it will cost; or they tell me what they want to spend and I tell them what they can get. But they cannot set both the requirements and the budget.

It is the role of the designer to interpret the dreams and wishes of the client, and to produce the best possible plan. This is the exciting part. At the same time, the realities of the budget are ever present, and in some cases, I become the "dream-killer."

Professional Help

Why hire a designer? Doesn't it seem reasonable to save 8 to 12 percent right off the top by working from stock plans? This may be a reasonable choice in cases where the needs of the client and the site can be matched to an existing plan. Since the match is never perfect,

however, this generally requires some degree of compromise.

I am occasionally approached by clients who have chosen a stock plan, but wish to make "minor" modifications. You know, they want a larger kitchen, the stairway over there instead of here, a fourth bedroom, etc. Unless the modifications are truly minor (change this window, eliminate the bump-out here) can be accomplished with minimal new drawings and detailed notes, the savings over starting from scratch will be modest. As soon as the plans need to be redrawn and redimensioned, you may as well start from scratch and get exactly what you want.

The matter is further confused when a client wants to build from stock plans, but wants state-of-the-art energy efficiency. Even if the details are clear, I've seen too many times how even seemingly minor changes, say in wall thickness, carry consequences throughout the entire building. Furthermore, I believe that any designer of merit will increase the value of a home by more than the cost of his or her services and will produce a design more specifically tailored to the needs of the client and site.

The Design

There are many ways to stretch the building budget to get the most bang for the buck. Taking this idea to extreme, however, will produce a house remarkably similar to the modulars and pre-fab tract houses that the client has come to you to avoid.

You must strike a balance, recognizing that the basic shape must be relatively simple. The more jogs, cantilevers, floor levels, angles, and rooflines, the higher the cost. This does not mean that I advocate building simple boxes, but rather that some trade-offs are needed. Personally, I would rather own a more interesting house with some charm than a larger, boxy one.

The amount of exterior skin required to enclose a given floor area is known as the *aspect ratio* (see Figure 1). A low aspect ratio indicates a simple shape, which usually means efficient use of materials, cost, and energy. However, complexity does not always add cost. I have seen on more than one occasion little difference in bid prices between similar size houses of varying complexity. This is sometimes the case because some trades bid per square foot, rather than "stick by stick." Even when they recognize that a design has some added complexity, competitive bidding may hold down any surcharge.

Space vs. Intimacy

Foremost on the list of ways to reduce costs is to build smaller. Begin by examining household functions and the space they require. Does the family really need a breakfast nook as well as stools at a kitchen island—plus a formal dining room in addition to a seasonal eating area (sunspace or screened room)? Does the client require both a family room and a formal living room? Do the bedrooms need to accommodate other activities or are they just to be used for sleeping? Is a dedicated guest room really necessary or can another room (den/study/office) have a sleeper couch for this function?

Often, we don't need as much space for furniture, equipment, and activities as we think we do. Sometimes we can trade off space for visual interest. For example, in a bedroom, I might trade off a dull, box-shaped room for a smaller one with an elevated ceiling. The additional height adds more interest and volume to the space. The actual requirements of the floor area are minimal. The ceiling space is available within the same building shell by tapping into the volume of the attic. Of course there's an additional cost to this, but it can be more than offset by the reduction in square footage. Another way to gain psychological space is to create several visual "escapes" for the eye. This may mean a strategically placed window with a long view, or an open plan that visually adds space from other rooms (see Figure 2).

In general, I try to sacrifice square footage in the private spaces, in favor of maintaining or increasing the public spaces. An area that does not profit from enlargement is the kitchen. Although storage area is essential, and having enough work surface is important, stretching out the "work triangle" only adds steps and makes the kitchen less efficient. A large pantry thoughtfully located, is well worth the investment and can significantly reduce the quantity and cost of kitchen cabinets required.

We Can Always Add That Later

The first removable feature is usually

the exterior deck(s). When it will only be a matter of a few years, we sometimes flash a pressure-treated plate to the building so that a watertight detail can be achieved after the fact. Most houses in this area (New Paltz, N.Y.) have screened rooms, since insects are a problem here. This is the next thing to go, unless the roof is contiguous with the structure. In that case, we sometimes construct the roof only, supported by posts, like a carport. The deck, framing, and screens can be added later (see Figure 3).

In my area, a fair amount of homes are second homes, used primarily on weekends, and in some cases mostly during the warmer months. If this is the case, there are other ways to save space. I would certainly not exclude the screened room from a summer home. In fact, I would normally downsize the main living area in favor of an extra-large porch, since this may be the most pleasant place in nice weather and is likely to get multiple use. I might put a little less emphasis on the kitchen since eating out may be the norm.

Now on to the more serious compromises: In the worst of cases (not for everyone) the finish floors can be held off. A good deck enamel over the plywood subfloor is quite serviceable for years. I know this to be true from first-hand experience, and I know many other builders' own homes with the very same floor treatment. Adding the finish floor later is likely to be a somewhat messy application (consider pre-finished hardwood flooring). Likewise, porcelain light fixtures are perfectly safe and adequate (not in closets) until more extravagant lighting fixtures can be afforded. You can pre-plumb and wire for the whirlpool tub to be purchased later, or rough-in for that second or third bath to be completed later. These measure, although somewhat extreme, may make the difference between a project that comes to fruition over a short span of years and one that never leaves the drawing board.

We'll Finish It Later

When you're at the point that any further cutting will elicit the response: "If we have to give up that, I don't even feel like going through with this," don't tamper with the design anymore. Rather, look at the more desperate means of getting the project going. One of these is to build the shell for the complete house as planned, but only finish 75 percent (or whatever's reasonable) of the inside. This approach is particularly effective when it involves a whole level of the house. Leaving a basement to be finished later is really okay and, in fact, is something of an American tradition. Likewise, leaving an attic or second level to be finished later may be the best compromise. In these instances, plumbing should be roughed-in for future baths, as well as electrical and other feeds. When possible, windows should all be installed in advance (don't forget code requirement for egress) unless this is simply not possible within the budget. Install a code-approved stair at this time.

In some instances, a wing of the house can be left for completion at a later date (see Figure 4). To judge the practicality of this approach, consider how much completing the space later will disrupt the family and the structure of the building. If the space is or can be truly isolated, particularly from dust, noise, and worker's traffic, then it may be a good candidate for later completion.

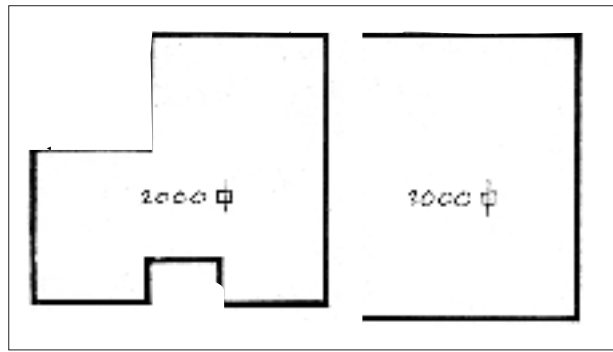


Figure 1. These two house shapes have the same area but the one on the left has a greater "aspect ratio" due to its complex shape. The house with more angles will generally cost more.



Figure 2. Small bedrooms can be made to feel larger by adding height to the space and by directing the occupants to long views.

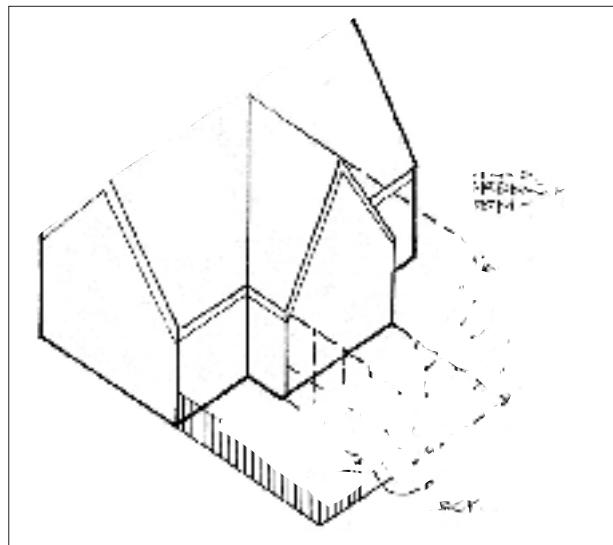


Figure 3. Porches and decks can be designed to be added later when the owner can better absorb the costs.

The opposite tack from all this is to downsize the project and see it through to completion on the first round but with an expandable plan. In this way, space may be added to the building over a period of years, ideally as space needs increase. If this approach is to be considered, it has to be known early in the design process.

Although in dollars and cents, the approach of building larger and completing later may cost less since there is less duplication of services, (particularly in excavation/foundation/framing and siding), the burden is that the home has an extended period of disruption. Since many carpenters and

builders endure this situation in their own homes, we are all in a good position to explain the intricacies of a never-finished house to our customers (including the effect this has on your loved ones or ex-loved ones).

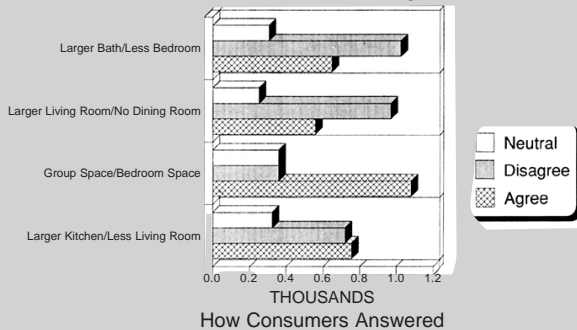
These days, I am a rather strong advocate for the second approach. I would rather design and execute a smaller house fully and enjoy it while saving up for the next pre-planned addition.

Don't Energy-Efficient Homes Cost More?

It is a common belief that energy-

Homeowners' Design Preferences

Trade-offs in House Design



How Consumers Answered

NAHB Space Survey

Consumers are seeking larger, more luxurious homes. But are they willing to trade space in some areas of the home to enlarge others? To find out what type of space homeowners' really want, the National Association of Home Builders (NAHB) surveyed 1,800 consumers who had purchased a new home after 1980.

Fifty-nine percent of the homeowners agreed and 28 percent disagreed with the statement "[I] would prefer a larger family room instead of a living room." (The wording suggested complete elimination of the living room.) Fewer people want space for formal home entertaining.

Survey results upheld the notion that older households in the more conservative Northeast value living rooms most highly. But surprising regional preferences showed up. More midwesterners and southerners (60 percent each), than westerners (56 percent) and northeasterners (52 percent) preferred a larger family room instead of a living room.

Age made a difference in how people responded. More than 60 percent of the younger homeowners (less than 45 years old) would trade living room space for larger family rooms. Those in the 45 to 65 age group were also willing to sacrifice living room area. In contrast, more than 50 percent of homeowners, age 65 years or more, values their living room area more than the family room.

Dining rooms hung in there though. Survey respondents weren't ready to give up dining rooms to get a large living room. Only 31 percent of the homeowners agreed and 54 percent disagreed with the statement, "[I] would prefer a larger living room instead of a dining room."

In some parts of the country, affluent consumers expect dining rooms. In the Northeast, two-thirds of the homeowners disagreed with the survey statement; 51 percent in the Midwest disagreed; and 52 percent in the South disagreed. About 44 percent of the homeowners with combined household incomes less than \$30,000 didn't want to give up dining room space for larger living rooms. But 71 percent of

homeowners with combined household incomes of \$100,000 or more didn't want to sacrifice dining room space.

According to the NAHB survey, bedroom space was highly prized. About 60 percent of the homeowners disagreed and only 20 percent agreed with the statement, "[I] would prefer more group activity space and less bedroom space." But homeowners split over the value of kitchen and living/dining room space. Forty-two percent of respondents agreed and 40 percent disagreed with the statement, "[I] would prefer a large kitchen and less living/dining room space."

About 57 percent of the homeowners responded unfavorably to larger bathroom and less bedroom space. Westerners (62 percent) wanted to keep their bedrooms large. And southerners (54 percent) didn't favor the bedroom/bathroom trade-off. Sixty percent of married homeowners with children didn't want to cut down bedroom size to increase bathroom space. Fifty-two percent of singles and single-parent households disagree—they wanted more space in the bath.

Most survey respondents agreed on sacrificing wall cabinet space for window area. Only 17 percent of the homeowners were willing to trade more window area for cabinet space.

Two out of three homeowners had to have a family room. Midwesterners (74 percent) were most enthusiastic about family rooms/great rooms, compared to northeasterners (70 percent), southerners (66 percent), and westerners (65 percent).

As expected, larger families demand family rooms. Only 50 percent of singles or single-parent households must have family rooms, compared to 60 percent of married homeowners without children and 78 percent of married homeowners with children.

According to the NAHB, the survey results generally agreed with other polls.

Adapted with permission from Housing Economics, published by the National Association of Home Builders, 15th and M Street, N.W., Washington, DC 20005.

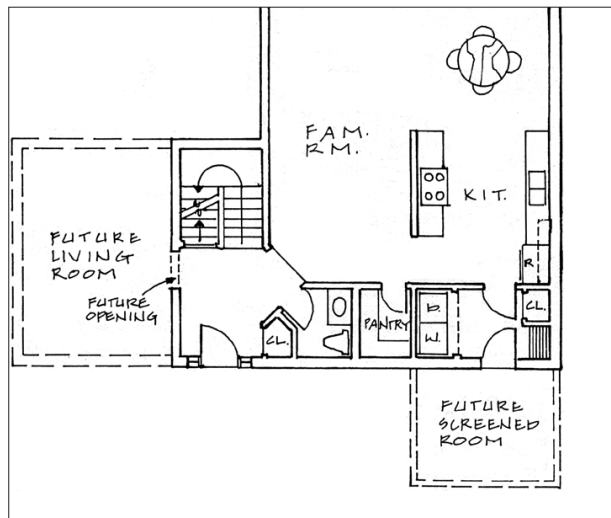


Figure 4. In some instances, the design can include entire wings that will not be completed until a later date.

efficient houses cost more to build. There is a clear reason why this belief persists: It's true. How can a client justify additional costs up-front to save energy over the years, when they can barely afford to build the house at all?

For the average home, I have found a very simple way to justify added costs in this area. Let's say that the client is considering spending an extra \$5,000 for an "energy package," which includes upgraded wall, floor, and ceiling insulation, as well as high-perfor-

bath probably does add more market value to the house, at least in the short term. When this situation occurs, we go to the bank to try to get the debt-to-income ratio increased. A reasonable institution will realize that the actual cost per year to the homeowner will be about the same, and in fact the borrower is shifting payments to the bank that would have been made to the utility or oil company. The bank makes more money and at the same time reduces the financial vulnerability of the bor-

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mance windows and a heating system that also distributes fresh air. The package would add about \$50 per month to the mortgage, but typically reduces the energy use of the building by 60 to 70 percent. This saves the \$600 per year spent on the mortgage.

It's also important to note that with the present tax structure, mortgage interest is deductible. By paying that money to the bank, your clients can take a deduction. By paying that money to the bank, your clients can take a deduction that they wouldn't get by paying the same money to the fuel company. They can actually end up spending less per year! In addition, there is added comfort, quiet, air quality, and value in these homes.

Occasionally the energy-efficient home costs a little more to own, but at present fuel prices, most clients understand that a better house should cost more to build and that over time, fuel prices will rise. If you have clients who believe that fuel prices will remain stable, I have some Florida swampland to show them.

A more difficult situation occurs when the clients are at the limit of their borrowing capacity. This may force a decision between the "energy package" and some other more tangible option, like another bathroom. I don't like this situation because the added

rower by reducing the impact of surges in fuel costs. Banks vary in their willingness to bend established precedents. Shop around.

Other Places to Save

As most builders are aware, the real driving force that elevates square-foot costs is not in the framing, siding, insulation, or exterior finish, but rather the interior finish. The amount and quality of ceramic tile, cabinets, paneling, plumbing fixtures and faucets, lighting fixtures, and trim are what usually separates the \$75 per-square-foot house from the \$100 model.

Although tiled showers and tub enclosures are attractive, acrylic one-piece units are very serviceable, cheaper, and often easier to maintain. White fixtures are never out of style and allow more freedom for decorative changes over the years than fixtures with "premium colors." Sometimes you can date a bathroom from the fixture colors that were "hot" that year.

Small areas of accent with ceramic tile can be just as visually effective as large expanses. Consider an inexpensive line of tile and add interest with color or pattern. Simple, practical, mid-priced chrome faucets will work just as well as the trendy stuff, as far lower cost. In the kitchen, all options for countertops other than plastic lam-

inate are much more expensive. If you're pinching pennies, you can't afford them.

Owner Participation

There's an old saying about carpenters having a higher hourly rate if the owner watches and doubled if they help. This can be a can of worms to be avoided. There are, however, a couple of exceptions to this where real savings are possible. The first is painting and staining. These days it costs thousands of dollars to paint the interior of an average house. Many people are capable of doing this, and usually it can be done without tripping over the other trades—possibly in evenings and on weekends. When this option is discussed, there must be a clear understanding of the timetable and of the consequences of not meeting that schedule. It may mean, for instance, that the floors must be finished before painting is done, and any painting after that will have to be done with greater care. When siding is to be pre-stained before installation, this may also be considered.

A second possible homeowner job is insulating. In this instance, the work might actually be superior to the contractor's own crews. It is important that the homeowner understands the value in doing a neat job (without gaps, puckering, voids, etc.) and the effect this will have on their fuel bills. If this is the case, they are apt to be highly motivated to do a painstaking job. Once again, there must be an understanding of the consequences of holding up the job.

What I Won't Cut

I don't like clamshell or colonial trim, hollow-core doors, or cheap hardware. If we're doing a custom house, I usually keep the trim detail simple, but

I prefer square-edge or rolled-edge stock to the standard trims. Sometimes "sanitary-style" trim is almost the same price. This is simple flat stock with an eased edge. When we have the budget we may trim in hardwood with a natural finish, but this may be one of the first things to go when we're trying to cut. If it's going to be pine, we usually paint it a slightly different color than the walls to add interest. Doors are solid-core, at the very least at entrances to all rooms. I'm less picky about closet doors being solidcore. I like oak-veneered doors with a natural finish. Even when the trim and jamb are painted, these add a nice touch at relatively low cost. My houses have thick walls, so we could spend a lot of money on trim at the windows. Instead, we do a drywall return at the sides and top, and spend a little money on a custom oak still.

What makes a house desirable has as much or more to do with the flow of the floor plan, the sense of proportion, the window shapes, sizes, and patterns and the way it blends with its site, than with the parts and materials that make it up. If the client can't afford the best of everything, the house can still be an outstanding eye-catcher. I guess this takes me back to my first point—that the design is more important than anything else. If we can't trim the cost of the building to meet the budget using the bag of tricks I've described, then it's time to return to the drawing board to create something equally exciting, although less ambitious. In the end, that's what I won't cut. ■

Chuck Silver designs houses and runs training seminars on energy-efficient construction for the New York State Energy office.