beauty on a budget

how to design a high-quality house at very low cost.

by duo dickinson

Photos: John Pelverts

Top: Identical mullion dimensions turn river-facing windows into a screen of glass. Above, left: On the front elevation, dynamically balanced windows/eaves enliven a classic gable. Above: The site.

About six years ago, I was contacted by Nancy and Mike Johnston, who faced a classic dilemma: how to maximize their "bang for the buck" on a site with mixed blessings.

They lived in a home in Niantic, Conn., that they had inherited and that had two significant amenities and one large drawback. The amenities were plain to see: The house faced a community green (the site was originally a "spiritualistic compound" formed almost 100 years ago) and its back side had a wonderful panoramic view through mature maple trees of the Niantic River. The one clear downside was the site's microscopic size—approximately ⅛ acre.

It has now become a classic paradigm of residential construction on coastal/water-feature sites that nearly all of the homes that pre-date zoning are "pre-existing/nonconforming." In other words, what is in place now could not have been built new.

price controls

Beyond these positive and challenging aspects, the project was fraught with financial concerns for the Johnstons—as such projects so often are for two-income families seeking to control their domestic environment. Essentially, the couple had a budget of approximately $160,000 in 1995. The house that could conceptually be built on this site was somewhere between 1,500 square feet and 2,000 square feet, given the absolute limitation of the home to the pre-existing footprint. At that time (absent our present glut of construction), this was bordering on possible.

As the project progressed with sporadic bursts of design activity, regulatory approvals, bidding, and so on, we entered into a three-and-a-half-year process of preconstruction design and permitting and, of course, the concomitant unavoidable increase in construc-

continued on page 32

tion cost. Throughout all the ups and downs of the dollars and the building officials' evolving criteria, the owners were steadfast in their determination that they would build this house. We ended up with a $200,000 price tag on an 1,800-square-foot building that had two-and-a-half bedrooms and one-and-three-quarters baths.

What made containing the budgetary creep even more challenging (and inspirational for me as the architect) was the homeowners' dedication to providing for high-quality, high-durability, aesthetically genuine components—wood siding (not vinyl), wood flooring (not carpet), a wood-burning fireplace, and expressive window-scaping with good quality windows (in this case, Andersen).

within limits

The final product exemplifies an invigorated design sensibility expressed within extraordinary limits. The limits were not just financial, but also dimensional and sequential—we had to maintain a vestigial portion of the original house as we went through construction on this tiny lot. Despite these restrictions, for about $110 per square foot (including a full basement and the amenities listed above), we were able to create something that is a beacon of hope for average citizens—who thought they "just couldn't afford" a custom home.

Knowing the limits that were present, I worked on an hourly basis, utilizing some of my lowest-billing dollar-per-hour employees and engineer Ed Stanley of Guilford, Conn., to keep our fees down to about 5 percent of the construction cost. We did very limited site inspections, no shop drawings, very basic detailing, and a great deal of specification writing and over-the-phone/e-mail consultation.

This project represents one area where the Internet has truly helped our office. For the hot and heavy period of construction (lasting about four or five months during foundation, framing, and mechanical roughing), I received weekly or sometimes daily e-mails from my clients of images from the site and queries as to the appropriateness or potentialities present in the built product.

The project was blessed with builders, Sutherland

continued on page 33

"the abundance of limits was overcome by the dedication of all parties concerned to building well on a budget."

thrifty design tips

1. Rectilinear always saves over polygonal or curvilinear.

2. Stock/standard materials are always easier to price and obtain, and minimize mistakes and delays.

3. A house that can shrink to fit a client always saves money.

4. Symmetrical gable framing is always cheaper than ridge beams, multiple pitch trusses, and the like.

5. Flat stock trim is very forgiving.

6. The higher up you get, the cheaper materials you can use. (We used T1-11 siding for the chimney mass, simple asphalt shingling for the roof.)

7. Minimize valleys and hips. Not only do they involve extra framing, they involve flashing, shingle lapping/weaving, and so on.

8. Minimize bearing conditions; one central bearing condition or one-way framing is always cheaper and easier than more.

9. Simple straight-run stairs are always cheaper, and closed-stringer stairs are cheaper than open.

10. Simple right-angle eave fascias minimize trim detailing freak-outs.

11. Try to avoid gutters. Not only do they add cost, they also create a lot of maintenance. With careful planning, the roofscaping can usually direct water away from where people enter and groundwater can most often be collected by at-surface/below-surface water-collection/detention systems.

12. Stack "wet" spaces over first-floor spaces that have plumbing. (But don't worry too much about having the kitchen or laundry be off on their own on the first floor, as that involves a relatively minor additional cost compared with having the vent stacks double up.)

13. Put mechanical equipment in a simple, rational place for easy venting and distribution, especially if you have a ducted heating system.—*d.d.*

and Krause of East Lyme, Conn., who have a wealth of common sense and who exhibited hard-edged integrity and commitment in a situation with little or no budgetary leeway.

The reason that residential architecture is sustaining to those who devote their lives to designing and building homes is that no two scenarios are ever alike and, in this case, the abundance of limits was overcome by the dedication of all parties concerned to building well on a budget. ra

Duo Dickinson is an architect in Madison, Conn., and the author of several books on residential design.

cheap beauty tricks

1. Inexpensive oak flooring, although more expensive than vinyl or carpet, is more durable and conveys a sense of quality unmatched by any other "cheap" material.

2. Nine-foot or 10-foot ceilings in the common areas, when supplemented by enough large-scale windowscaping, can make spaces seem far larger in volume than they actually are in plan.

3. Creating front-to-back and side-to-side cross-referencing axes (front door to back door, kitchen or dining to fireplace, master bedroom to big-view windows) allows visual connection to defeat the sense of being small.

4. A stock prefab fireplace with a straight-run flu transforms the ambience of a house for relatively little cost.

5. Pattern windows to make them into large-scale elements via the use of absolutely consistent trim.

6. Custom elements can make a huge difference in a simple context, such as the granite countertop seen in this project's kitchen (a kitchen that is built from stock parts), or the customized eave detailing up around the second-floor walkout.

7. "Real" materials always read better than synthetic ones. In this house, painted wood trim and siding have a crisper look than their synthetic counterparts.—*d.d.*