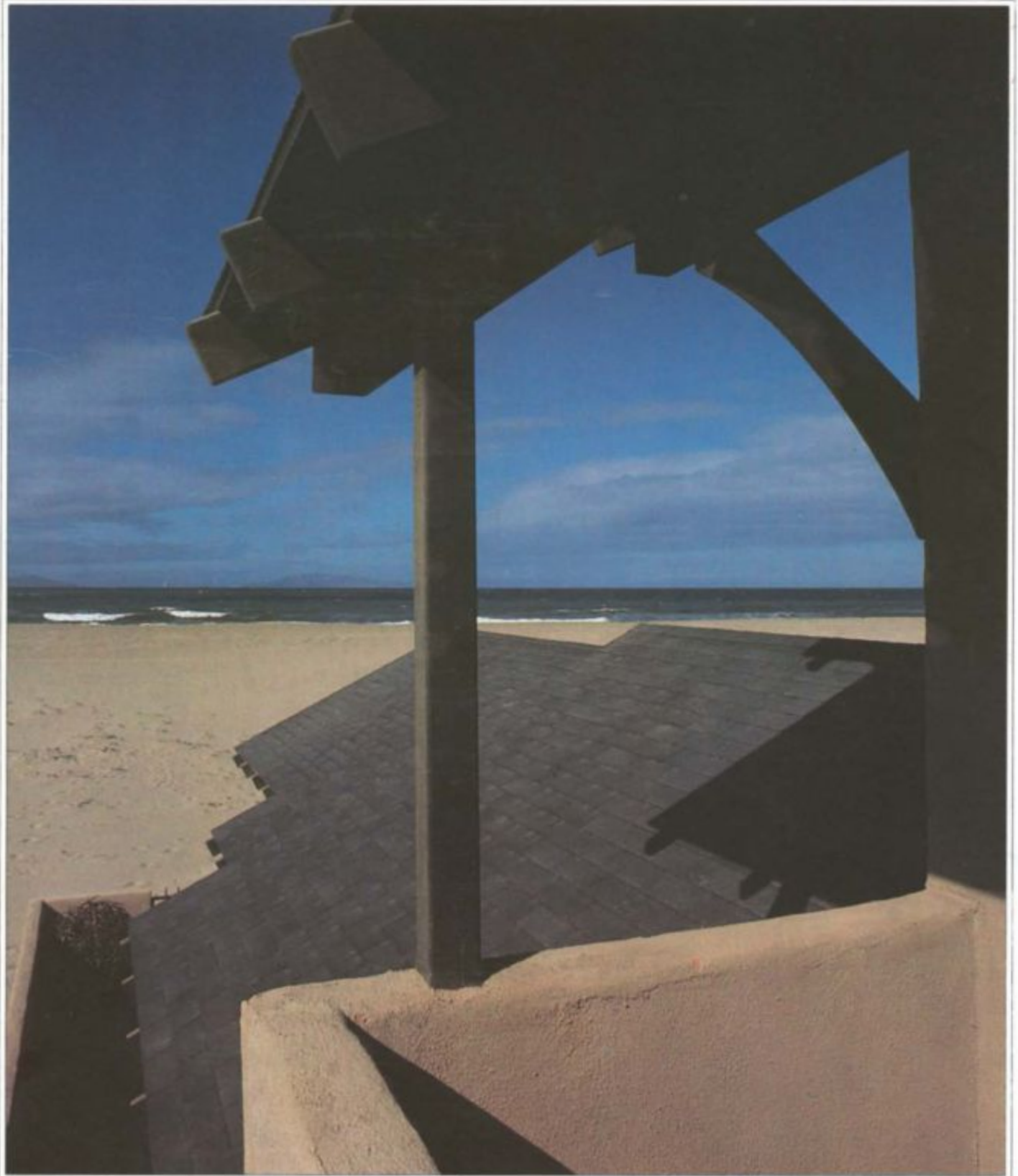


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Craftsman-Style Beach House



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Craftsman-Style Beach House

Getting the most from a 25-ft. wide lot and a tight budget

by Tim Andersen

The house that formerly occupied this 25-ft. by 100-ft. patch of sand in Oxnard, Calif., burned down in 1982. It had been a rental house, and its owners, Rolando and Linda Klein, asked me to design a replacement. Their insurance settlement wasn't enough to cover current building costs, yet the mortgage company threatened to call the loan due if they didn't rebuild. To resolve their dilemma, the Kleins decided to build a small house as inexpensively as possible, and sell it when it was done.

The Kleins and I agreed that the new design should have three bedrooms, two baths, a family room and a breakfast room—all somehow squeezed into 1,500 sq. ft. and costing under \$60 per sq. ft. (about \$15 below the going rate in Southern California). The challenge was to

design a comfortable, efficient house that would feel much more generous than its small square footage would normally allow, and one that could be built using conventional materials and methods to keep costs in line.

The zoning straight jacket—Zoning ordinances required our new house to maintain a 20-ft. setback from the street, a 6-ft. setback from the beach, and a 3-ft. setback on both sides. Further, we had to comply with a 25-ft. height limit. Since one of these tiny parcels sells for about \$200,000, everything built in this area tends to fill the allowable zoning envelope with as much house as possible. This leaves 6-ft. wide wind tunnels between each box, bisected by a fence down the property line. Zoning also

required four on-site parking spaces, two of which had to be enclosed. Parking alone ate up 30% of our lot coverage to begin with. To make usable outdoor space possible in this situation, zoning should allow for a staggered placement of houses on adjacent lots and zero-lot-line development using fire-rated party walls.

In striking contrast to all this mandated confinement was the expansive, wind-racked beach, hundreds of yards deep with waves crashing onto the shore and receding into the blue Pacific. Clearly, the house wanted as much exposure to this wonderful view as possible.

Fitting into the neighborhood—There were many older beach houses in the neighborhood, built as summer retreats in the early part of this



century, when land and construction were cheap. Designed simply for comfort and without pretension, these houses appear to many of us now as archetypes—pure examples of what a beach house should feel like. The older homes are far more satisfying than the new spec houses that are being built with a hook for every potential buyer, each house trying to upstage the others. In my design for the Kleins' house, I wanted to make a clear connection with these earlier beach houses and to avoid the hawking aggressiveness of this newer bunch.

Custom work at tract-house prices—As we sized up the situation, we saw an opportunity to beat the developers at their own game. We would employ the same low-budget construction techniques—wood frame, concrete block, drywall and stucco—but aim for integrity rather than glitz in the final product. Certainly, we thought, there must be buyers who shared our bias. The quality would come in part from careful detailing in design, but the crucial difference would be made by the builders.

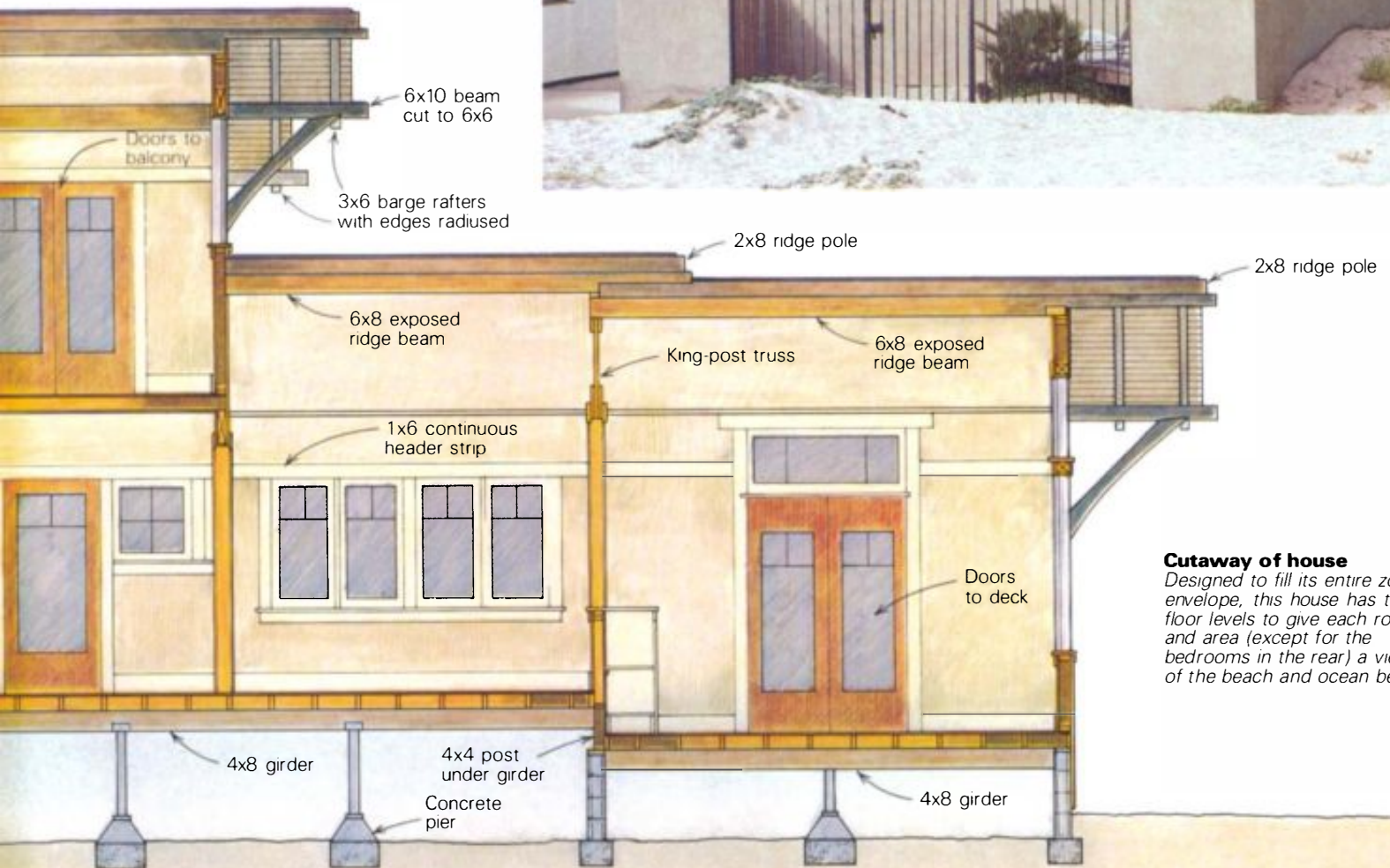
Through my work in Pasadena, restoring houses from the Arts and Crafts Period (1900-1915), I had met several contractors and craftsmen who, like myself, found sympathetic precedent in the attitudes represented in this earlier period. Their involvement in a project from start to finish was part of a commitment to this work that placed the emphasis on taking satisfaction in the process and pride in the results. One craftsman I met, who shared my enthusiasm for

finding ways to revive this Craftsman attitude and give it fresh expression, was Glen Stewart. We worked together for two years at one of my most fully realized restoration designs, Greene and Greene's Bolton House (*FHB* #17, pp. 28-34). With Stewart as the builder, this beach house would be our first chance to bring these ideas into the present.

Coming up with a plan—In response to the narrow slice of beach frontage and the probable construction of another house to the south, I designed the house to be a grandstand to the ocean view, with each space stepping up to look over the one in front (section drawing, below). In gradual increments, the house would climb up over the garage where the two children's

bedrooms would be located. These were the only rooms that would not face the beach. Above the kitchen and dining room was the master suite looking over the living-room roof to the ocean. The organization of the interior is clearly visible from the outside as the roofs cascade over one another. The plan has a jog and a notch along the south wall; these not only gain more deck space but they work as well to get beach views from the living-room sitting area and from the breakfast nook farther back.

Because of the tight square footage, it was important to have many rooms share volume and daylighting so they would feel generous. Pitched ceilings and high windows would also help to open up the spaces. The communal areas of the house were designed to be unobstructed by par-



Cutaway of house
Designed to fill its entire zoning envelope, this house has tiered floor levels to give each room and area (except for the bedrooms in the rear) a view of the beach and ocean beyond.



The fireplace (above) sits at 45° and holds the corner between the living room and dining room. Along with the offsets in the plan, half-walls and changes in floor levels, the fireplace is part of Andersen's scheme to create a sense of discrete spaces while leaving the communal part of the house visually open from one end to the other. To make the most of precious space, Andersen used part of the setback for a deck (below left). The jog in the south wall extends the width of the living room and offers a window's worth of view toward the beach. The stairway to the master bedroom (below right) takes a couple of bends and makes this area seem as withdrawn as possible in a small house. The railing at the landing is simple but effective. The rails top and bottom were grooved. The grooves were fitted with spacer blocks glued in at regular intervals, and the resulting holes made mortises for the balusters.



Upper-level plan



Lower-level plan



tition walls. You can see from the family room all the way to the rear of the kitchen (photo facing page). Even better, you can look out from the kitchen through the living room and family room all the way to the ocean.

A common problem with many open plans is that spaces aren't clearly defined, which makes it difficult to decide where the furniture should go. Spaces must suggest traffic patterns and a sense of enclosure, yet they need not be walled in to accomplish this. Discrete spaces can be suggested simply by defining the corners, in this case with truss and posts, half-walls and built-in cabinets. As I worked with the plan (drawings, bottom left), it occurred to me that by changing the floor elevations and by offsetting from each other the two sets of steps between the family room and the kitchen, I could create eddies in traffic flow, the obvious areas for seating.

Another concern was to take full advantage of any space not built on for decks and gardens. I wanted the beach sand to come right up to the windows on the west. The northern 3-ft. setback was to be planted in eucalyptus, whose branches would eventually reach the high windows. On the south would be a sunning deck 30 in. above grade (middle photo, left), to be supported by a 6-ft. high masonry-block wall running right along the property line. Anything built above 2½ ft. within the setback would be considered an encroachment. The remaining 3½ ft. of fence above the deck worked as a railing. In this way we could reclaim the precious 3 ft. of wasted space in the setback.

From this deck one enters the house directly into the dining room (photo at top), which I envisioned to be the center of activity. Here, the family and guests could do everything from sorting seashells to savoring coffee. From the dining room the kitchen is two steps up; a half-wall keeps its counters out of sight but leaves the area open to adjacent spaces and to views of the beach. There is a breakfast nook on the same level and a laundry area tucked behind bi-fold doors. The washer and dryer occupy space over the car hood in the garage below.

The two children's bedrooms have skylit sleeping lofts above their closets. The master suite is up a short flight of stairs (middle photo, right) and around a couple of turns that make it seem as remote as possible in a 1,500-sq. ft. house. The master bedroom has a small balcony, a built-in desk, its own bath and double closets.

The fireplace in the living room has several other jobs besides burning wood. Its placement suggests a corner of the dining room, providing just enough enclosure to define the space. At a 45° angle (photo at top), it faces and anchors the corner seating in the living room.

Foundations—When the permits were secured, Stewart moved from Encinitas, near San Diego, to a temporary place in Oxnard. He assembled his crew and made plans to begin construction in April 1983.

The sand was graded and compacted for conventional, poured-in-place perimeter concrete footings—no caissons were needed. The engineers assured us that the sand had adequate bearing capacity because it percolates so well;



Looking east from the family room toward the kitchen, the effect of the tiered plan is evident. Two steps up from the family room is the living room/dining room, and two more steps up is the kitchen and breakfast nook. Beyond that, a stairway leads to the bedrooms and baths. By placing each area on a level higher than the one to the west of it, Andersen created a kind of grandstand so that each space has a clear view of the ocean.



Framing, plain and fancy. The floors and walls for this California beach house are conventional 2x framing (above), except for purlins that extend the top plates of the long exterior walls. These 6x6s are supported with Craftsman-style knee braces. The concrete-block foundation walls were laid up flush with the wood framing and later plastered as a continuous surface. The king-post truss that separates the family room from the living room (below), combines wood joinery and metal fasteners in a design that's both handcrafted and practical. The tops of the two posts are tenoned to form seats for the bottom chords, and the king post and web members are also tenoned on both ends where they are sandwiched between the double chords.



they also said that if our footings and foundation walls were all properly tied together we would not have any settlement problems. The only slab on grade was to be for the garage and mechanical room. The lowest framed floor is 30 in. above grade, which means that any water flooding the site could pass by the building without reaching floor level. The foundation and perimeter site walls were laid up quickly using 6x8x16 concrete blocks with flush grout joints. These walls would be plastered later, at the same time the framed walls would get their plaster.

Framing—Stewart's three-man crew began framing in mid-April. The platform framing used for the floors and walls was entirely conventional, therefore fast and cheap (photo top left). The more expensive part of the framing was doing the roof with beams and purlins for the open, pitched ceilings. We extended the eaves to their legal limits (9 in. over the setback line) to get the kind of generous overhang that is a hallmark of Craftsman-style houses. The 6-in. rafter tails were radiused with a router using a rounding-over bit, and prestained to contrast with the roof decking. For the roof decking we used $\frac{5}{8}$ -in. plywood, except where it was visible under eaves. There we switched to 1x6 V-groove T&G decking that is $\frac{5}{8}$ in. net to match the plywood. This was also prestained.

The most interesting part of the roof framing was the king-post truss (photo bottom left), which was designed and built by Rodger Whipple. This truss, along with the exposed posts it rests on, visually separates the living room from the family room. The natural wood finish of the truss, posts and ridge beams lends a feeling of warmth and hand-wrought quality to an interior that's mostly drywall.

To support the double bottom chord of the truss, Whipple notched the top of each 8x8 post to form a vertical tenon. One of the 3x8 chord members sits on either side of the tenon, and a bolt through both chords and the tenon holds things fast. The double 3x6 top chords were level-cut to rest atop the bottom chord, and Whipple secured the connection by gluing in a spacer block here; it fits into the gap left between the top edges of the chord and the top of the tenon on the posts. The webs are also tenoned on both ends, and fit in the slot between the double bottom chord and the double top chords. The king post is treated in like manner, though the tenon on top is square in section where it fits into the ridge beam. All exposed edges of the truss members were relieved with a $\frac{1}{2}$ -in. rounding-over bit, and the wood was sanded before the Watco oil finish was applied.

Windows and doors—We insulated the interior and exterior walls with R-11 fiberglass batts, and floors and ceilings with R-19. On the interior, these insulated walls help deaden sound.

Double-glazed windows are the common choice in most well-insulated houses. But we wanted a consistent glazing motif with real muntins throughout the house, so we decided to go with single-glazed. The decision to use single glazing meant—according to code—that the allowable glass area for windows, skylights and

French doors could not exceed 20% of the floor area of the air-conditioned spaces. I used every square inch of the allotted area.

The windows were prehung wood casements made from standard parts. They were actually quite a savings over what custom sash and frames hung on site would have cost. The company that built them charged by the number of lites, and their configuration didn't affect cost. The consistent use of the same glazing pattern in windows is a common Craftsman period device that gives a sense of unity to a variety of wall openings.

Stuccoed walls (and a near disaster)—For a sense of unity, I wanted the exterior walls to be consistent in material and color throughout. The finish had to be durable and not require much maintenance. Since cost was also important, stucco was the obvious choice. To reduce labor, we used K-Lath (K-Lath, Div. of Tree Island Steel, Inc., Box 2120, Monrovia, Calif. 91016) so that the building would be wrapped only once. This product includes a vapor barrier, mesh and perforated kraft paper fastened together in one roll.

The concrete-block foundation walls and exterior plywood framing were flush, and intended to blend together without a visible seam. I realized, however, that because of their different rates of expansion and contraction, a crack could develop at the juncture of wood and masonry. The remedy was simply to add a 24-in. wide band of expanded-metal lath that covered the joint and provided extra reinforcement. The block walls took plaster directly in two applications. The frame walls had the standard hand-applied scratch, brown and finish coats.

But once the house was wrapped and given its scratch coat, it looked like a stucco box with funny little windows. It was evident that my aspiring Craftsman Revival house had taken a nose dive, and looked more like a dingbat condo than I dared admit. At this point I decided to reassert our differences with the condo brethren by ignoring the standard range of nondescript, tasteful color coats offered, and instead, go for an earthy, passionate, vivid color. Terra-cotta seemed just right. We ordered samples from the stucco supplier, and I finally settled on what the plaster people considered the limit of pigment per batch that would not jeopardize the chemistry. We applied test sections on the house. Linda Klein and I drove up from Pasadena to approve the decision. It was risky, but we loved the color, and told the plasterers to go for it.

Completed, the house looked absolutely awful. The sheer intensity of those huge stuccoed walls in the sun was blinding. The white house next door had turned pink in their reflection. What little wood detail there was on the exterior—rafter tails and windows—was swallowed up by this pulsing terra-cotta glow. Stewart and the crew were totally depressed.

My clients agreed to split the cost of redoing the exterior coat. We thought about painting over the offending surfaces. But the likelihood of having patches of paint blasted away by wind-driven sand was reason enough to have the finish coat of stucco scraped off and a fresh one

applied. The plasterer was upset with the results, too, and gave us a good price on redoing the finish coat. We recruited a small army of laborers and armed each with a floor scraper and dust mask. After several days' work we had removed enough stucco to bond another finish coat, although the adhesion would not be as good as the first time. The next coat matched the color of the sand.

Interior finish—The interior walls and ceilings were sheathed entirely with 5/8-in. drywall. I would have preferred the same 1x6 T&G on the ceilings that we used under the eaves, but the cost would have been too high. To blend these sheet materials together and evoke Craftsman period interiors, we used the skim-coat technique we'd learned in restoration work.

First, we taped all the joints, and gave the rock one coat of mud in conventional fashion. Then we mixed latex drywall joint compound with #60 silica sand and troweled the stuff over the walls and ceilings. Working an area of about 3 sq. ft. at a time, we parged the mud/sand mixture onto the rock to a consistent thickness of about 1/8 in. When the mixture was about to set up (it starts getting a little leathery at this point), we troweled the surface with a moistened sponge float to bring the sand to the surface and give the walls an even texture. Only one coat was needed, and the result looked just like three-coat plaster. The ceilings and walls in the kitchen and baths were finished smooth (without the sand) because a rough texture is inappropriate for these rooms.

Casings, baseboards and continuous header banding were to be made of the least expensive paint-grade wood possible. The pine that Stewart bought arrived on the job and looked much better than we expected, so we resisted the plan to paint it white. The plaster walls and ceilings were going to be medium grey. We needed a light, off-white trim color that could be as easily applied as an oil finish. But oil alone gives pine a wretched yellow color, so we bought some titanium white tint from the paint store, mixed it with Waterlox, a polymerizing tung oil (Waterlox Chemical and Coatings Corp., 9808 Meech Ave., Cleveland, Ohio 44105), and wiped it on a sample board. The white killed the yellow, but let the grain and character of the wood remain. This technique also reduced labor. In one application we could finish the pieces of precut trim before installing them.

We left the header strips 3/4 in. thick, milled the casings 5/8 in. thick and the baseboards 1/2 in. thick. There is a slight step from one trim surface to another at each connection. Stewart considered various options for joining the trim boards. He worked out a quick and visually pleasing way to connect pieces with simple butt joints, which depends on adjoining members being of different thicknesses. Where, say, a header strip meets a window casing, the underside of the thicker casing is rabbeted so the top end overlaps the casing by 1/2 in. The corners of the header are slightly rounded and all the edges are radiused with a 1/4-in. piloted router bit. Other connections, like side casing to head casing, are plain butt joints with the edges of the thicker

member radiused. Trim pieces that join at outside corners are handled by letting one piece run 1/2 in. beyond the other and rounding over the proud member's corners and edges.

This simple method of joining trim saved a lot of time because the carpenters didn't have to fiddle with cutting and fitting mitered joints. And true to the Craftsman look, there's an interesting layering of planes where pieces of trim come together. It's something you just don't get with mitered moldings.

Continuous header strips above doors and windows were another common device in Craftsman homes. They were used to unify the space, to tie things together visually and to scale down rooms to make them seem more intimate. In many Craftsman homes the paint color would change at this juncture. The upper color would wrap over the ceiling down onto the wall, where it would stop at the header strip. We used the same grey-green hue above the header strips, but lightened it to brighten the ceiling. With the 5 1/2-in. white band separating the two, people seldom notice the change in tint and tone, yet the desired effect is achieved.

The fireplace is a prefabricated unit with a triple-wall metal flue. To retain as much view as possible from the kitchen and dining room, the flue angles back to the wall once it comes out of the firebox. Stewart worked out a series of stepped gypsum shelves to box this pipe in. Since the code prevented our using wood this close to a flue, Stewart couldn't build a 2x framework to hold the rock. So he fabricated the entire stepped flue box by joining the pieces of gypsum with 90° outside corner bead. He held the bead on the inside of the corner and attached the rock with drywall screws, driving them through the rock and into the metal bead. Wood shelves and trim were added on top. Tile facing around the firebox and a raised hearth extend the line of the baseboard and increase the fireplace's appearance of mass—a quality that seems so comforting about masonry.

As completed, the house is bright and feels ample despite its small size. Interlocking the spaces was definitely the right decision. The realtors complained about the windows being too fussy and have asked how much it would cost to put in a nice aluminum sliding door to face the beach. We like the windows and the unexpected glimpses of the ocean one gets as you move through the building.

Ventilation works well with the transoms above the west windows and an operable skylight at the top of the stairwell. As the house heats up in the afternoon, the transoms can be opened to the prevailing westerly breezes, and the skylight exhausts the warm air from the highest point in the house.

Often when I show people the house, they aren't sure whether it's new or an old one in good repair. It fits easily into the neighborhood, and easily into one's notion of what a beach house should be. □

Tim Andersen, of Pasadena, Calif., runs an architectural practice, teaches design history at Art Center College and is chairman of the Pasadena Cultural Heritage Commission.