

Alternatives Abound for Housing Construction

Ewart (Red) Wetherill, Contributing Editor

A decent provision for the poor is the true test of civilization.

—Attributed to Samuel Johnson

After centuries of accepting this continent's colonial beginnings based on free land, unlimited natural resources and societal inequality, North Americans are belatedly starting to recognize three simultaneous crises with already serious consequences for everyone.

First is the lack of acceptable and truly affordable housing.

Second is the inability for many to buy or even rent, resulting from a grossly inflated housing market and the disappearance of formerly traditional jobs paying a living wage.

And third is the less immediately apparent but alarmingly significant large-scale destruction of forests.

We are only now becoming aware that the latter threatens water and soil conservation and the loss of entire species of flora and fauna through a chain of conditions whose ultimate consequences are largely unknown.

Since each of these conditions can be seen as the long-term outcome of deliberate financial and political policies, they could be quickly reversed if enough voters were convinced that availability of a more equitable housing alternative had sufficient merit.

Despite many potential innovations from aircraft and auto industries, most popular housing publications still favor romantic cottages with picket fences and apply the term "modern" to house designs originating in the 1920s.

Both style and building method are apparently determined by large industries that control both the acquisition and development of land, in some cases owning the companies that supply chosen building materials and components. Since their primary goal is to make a profit they are likely to resist change unless they can be convinced that revisions to their present business model could be shown to offer at least a comparable return.

However, nationwide housing fashions that can be traced to mail-order marketing techniques from the 19th century clearly make little sense for the wide range of U.S. climate extremes, where the cost of either heating, cooling or use of water has become a significant factor in affordability.

The creation of large-scale and really low-cost housing could probably be dealt with only by government initiative and investment. As demonstrated repeatedly in other countries, a wide range of viable

building methods is readily available using well-tested materials and cost-effective construction methods often meeting higher standards than in the U.S. These methods could bypass our almost universal reliance on wood, open up the increasingly controlled housing market to innovation and offer an immediate opportunity for growth to industries with excess capacity.

They could also combine such refinements as control of air and water leaks, and elimination of rot and insect damage with efficiency of production that brings into question the staggering cost of most U.S. housing. New industries would provide opportunities for sorely needed employment at skill levels from trainee to expert in the locations where most needed. Unfortunately, industry adapting to meet current needs could be complicated because proposals made at the national level tend to be opposed by individual states or municipalities.

Nevertheless, the fact that some existing municipal housing policies and standards may well have been in place since prior to the Civil War is itself a good reason for reconsideration and for questioning whether the ongoing dramatic changes in our society and in available technical resources justify an overall reevaluation of the standards and codes by which our building industries are controlled.

A thorough computer-based review would undoubtedly show that some standards or code requirements overlap or are in direct conflict with others and are in need of revision. Similarly, the design of housing elements, from lighting to plumbing and climate control, has seen many refinements in efficiency and control since the advent of computer controls. Many traditional items of equipment and the standards that govern their design have become effectively obsolete and should be replaced by more suitable models.

However, the common lack of support for professionals working on standards committees and their replacement by industry representatives may lead to rules favoring the supplier rather than the consumer.

I propose a comprehensive analysis of the entire housing industry, starting with major factors such as site selection and structures, based on the immediate need for more and better accommodation. This can no longer be left to the vagaries of an economic system dictated by financial markets or corporate manipulation but should be established by national goals and should encourage the level of design talent and cost control such as found in the automotive and aircraft

industries. The scope of this analysis could include many elements that are already in use and that go far beyond the initial search for better ways to build.

Site Selection. Preferably close-in, reclaimed urban sites, avoiding questionable landfill or flood-prone land, within easy walking distance of adequate public transportation and shopping. With no need for individual car parking, streets could be just wide enough for fire trucks. Some land would already be served to some extent by major utilities and might allow reuse of building materials already on site. If freed from rigid urban conventions or site restrictions, designs could take advantage of beneficial orientation, reintroducing a design dimension that has largely disappeared because of conformity with street layout.

Construction Methods. These methods could be shop fabricated for efficiency and amenable to installation by semi-skilled workers, such as factory-built house modules convenient for truck delivery. Load-bearing construction such as concrete or brick masonry could be suitable if near the source, except for sites prone to seismic activity.


Available Structural Methods. Recycled wood; concrete; steel or structural plastic framing, possibly incorporating geodesic dome or yurt principles; concrete spray-applied on fabric or reusable plastic forms.

Cladding. Prefabricated insulated panels of metal, wood, lightweight concrete or fabric could be factory built with interior finish surfaces and possibly plumbing or wiring.

Other Components. Door and window assemblies; built-in cabinets and furniture; possibly prefabricated complete kitchen-bathroom modules including piping and wiring.

Add-On Elements. Examples of production components from other countries include solar energy designs for lighting and power, waterless systems for human waste disposal and water storage from rain-catching roofs.

Are these proposals reasonable for North American housing?

When one considers our current unhappy state of house building and the desperate need for more accommodation, it is clear that things must change quickly. Code-sanctified preconceptions must be set aside in the future and a whole new generation of housing that offers immediate supply combined with long-term sustainability must replace it. 

Send your comments to the author at: redwetherill@sbclglobal.net.