



Site Planning for Successful House Design

by Gordon F. Tully

Architects love to think they are in total control of a house design, but alas (or thank God, depending on your perspective) this is far from the case. The best an architect or designer can hope for is to grab hold of the powerful forces shaping a house, rather like holding the reins of a runaway horse team.

Like runaway horses, most of the crucial elements in a house design cannot be stopped and started at will, but may usefully be redirected toward a good purpose.

So it is with the site. The New England site, like New England weather, exhibits staggering variety. Water, rock, vegetation, slope, local weather, soil type, surrounding construction, views and zoning regulations vary over dimensions as small as a few yards. Each site can safely be counted as unique in some way.

The bad news is the incredible persistence and ingenuity it takes to deal with this variety. The good news is the wonderful sense of place that results from a well-sited house.

The Golden Rule of Site Planning

There is no formula for dealing with sites, but there are a few ideas that should be considered by every builder, home owner or designer. Above all these ideas is one master rule: Do not settle on a house design until you have settled on a site design.

Among my saddest hours as an architect have been those spent trying to adjust someone's cherished design to a site that cries out for an entirely different house. People often dream up "ideal" floor plans, find them in a plan book (or get an architect to "draw up the plans"), finally secure a site and then arrange a shotgun wedding of the two.

Ideal plans are useful tools in writing the program for a future home. But there are an infinity of excellent ways to realize that program, and only a careful designer will find the best one. Even when dealing with manufactured and pre-designed homes, it is best to wait until the siting is worked out before selecting the model to build.

Regulations

Other site-planning ideas deal with the key elements in site planning: zoning and other legal constraints, site utilities, access, light, views, wind, vegetation, drainage and soils. Zoning and other regulatory matters are always the first issues to be considered.

A proposed design often must be subjected to scrutiny by a number of public bodies. Regulations are a complex issue and deserve an article or two by themselves, but two general rules are useful: Learn which rules govern before you buy a site or plan to build on it; and learn all you can ahead of time about the likely outcome of your building proposals.

Easier said than done, of course. Seek professional help from the leading local civil engineer or someone trusted and recommended by local officials.

Site Utilities

Site utilities or services must be considered along with these governing regulations, many of which deal with such things as sewage disposal and water supply.

If the property has town services, there is still the question of routing the trenches to the building. Sometimes the best route will disrupt the existing vegetation and suggest an alternative access route or building orientation.

On-site disposal of waste is a highly regulated matter. The perc and groundwater-level tests frequently deter-

Expect a fight if you try to resurrect a site considered unbuildable, even if you are legally in the right.

mine whether a site is usable and, if so, where one can build on that site.

Start with the leading local civil engineer, who usually knows what can or cannot be done. Get a second opinion before you give up. An apparently hopeless site sometimes can yield to a septic design that meets the law if you're willing to spend the money and time.

A determined owner must face the fact that many towns use septic-system regulations to control development. At best, limits on lot size and septic systems prevent overbuilding in sensitive environments. At worst, townspeople desiring to support property values by keeping out new development use regulations as anti-building cudgels. Expect a fight if you try to resurrect a site considered unbuildable, even if you are legally in the right.

The other utilities—water, gas, electricity, telephone and cable—seldom figure as important site-planning issues, except for the effects of the trench excavation, mentioned above. Nevertheless, you may approach insanity trying to get a straight answer from the power company—or bankruptcy trying to find enough water in New England ledge.

Access

Access is the next thing to consider in site planning. We forget how the size of cars, roads, driveways and garages relates to a house. Even the most compact car needs adequate turning and parking space.

The problem for the designer is to make car access graceful and natural, while saving key plant material and providing for a transition between the car and the front door—all the while taking care to avoid making the site look like a small shopping center.

Access roads leading up or down hills need careful study. There needs to be a level place to stop where the road meets the street. Grades should be below 10 percent unless there is no other choice and the owner accepts the winter problems associated with steep roads.

In addition, water must be drained off or led through culverts to avoid washouts and erosion. And the route should be attractive and should protect the house from headlights.

Arriving at the house, one preferably should not face a huge garage door. If there is no other option, put the garage door under a generous overhang, perhaps splitting it into individual single doors, and emphasize the house entry using steps, landscaping, symbols of entry such as lights and mailboxes, a covered walk or porch—anything to keep the garage door from dominating the composition.

Finally, don't block access to the back or side yards without thinking through the consequences carefully—particularly if you plan to landscape or there is room to build on an addition in the future.

Topography

A site's topography is often its most important feature. As Frank Lloyd Wright so convincingly taught us, slopes and land shapes can determine not only the house location, but the building form itself.

Arriving at the house, one preferably should not face a huge garage door.

Building on a slope costs more and makes access more difficult. Yet by building up, one can often protect a low-lying area below, while building near the top of a downslope cuts access distance and leaves the site below the house free for other uses.

Subtle topography requires subtle craft in the design. Houses that cling to or fit into a site are much more satisfying than those that merely sit on a big terrace. If they are not too large, however, terraces are indispensable devices for wedding a building to the topography.

Terracing requires money, but fortunately it can be accomplished over time. Even a two-foot change in grade can be enhanced by making the change abruptly at a wall- or rock-covered bank.

In one case, we located a house on a west-facing slope overlooking a meadow on a one-acre site, thus saving the meadow for the view rather than planting the house in it. This decision led logically to an "upside-down" house, with the living spaces on the second floor and the entry and garage at the half level. As in so many cases, the correct solution to the siting problem determined much of the house form and plan.

Gordon F. Tully is president of Tully & Ingersoll/Massdesign Architects in Cambridge, Mass.