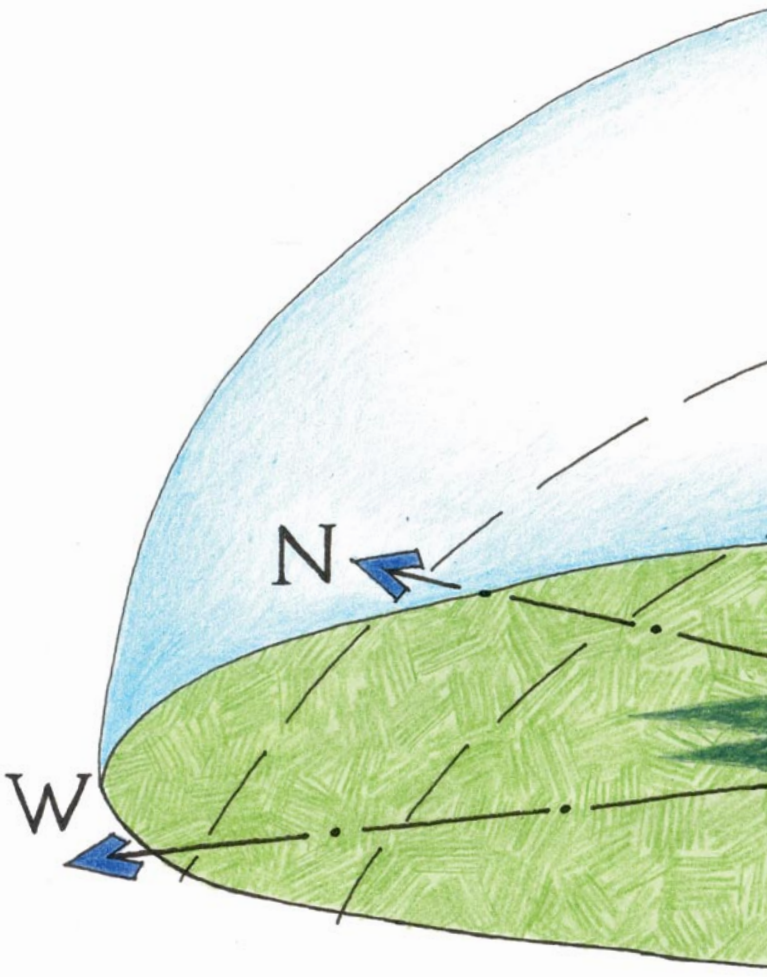
There's No Such Thing as a Perfect Building Site

BY JEREMIAH ECK



Of all the principles that govern house design, siting is the most underrated and most often ignored. You may have a functional plan or a pleasing, well-proportioned exterior, but those attributes won't be quite so evident if your house isn't sited properly. To my mind, the sprawling quality of most houses built today would be less offensive if a few simple siting principles were considered more thoughtfully. This is true for almost any piece of land, whether a quarter-acre lot in a subdivision or a spectacular site along the seashore.

Siting is also increasingly important because in most towns, the good sites are long gone. The only sites left are those that are problematic in some way: a featureless lot in a development, a downslope lot that tumbles away from the edge of the road, or a lot that's restricted by setbacks and zoning. If you examine a site closely and plan to surmount its shortcomings, then you can end up with a better house.

Invest in the process of discovery

I advise everyone to research a building site as they would a good Wall Street stock. Start by collecting all the external data, such as site boundaries, topography, weather, and restrictions. I walk the site at different times of the day and at different times of the year to see what's nearby. I always carry a compass to determine where south is, to figure out where the sun rises and sets, and to see how the sun tracks across the sky. Bear in mind that the winter view is very different from the summer. To get a better view of the topography, I bring a stepladder or climb a tree that approximates the height of a house's first floor.

I also look for good views. When you're in a house, you need a relationship to the outside, something that draws you to the window from time to time. All sites have a vista of some kind: a little meadow, a swale in a distant hill, a grouping of trees. My job is to find that view and make the house take advantage of it. I take notes about the site's vegetation and look for any large trees that I might want to save.

Finally, don't ignore the wisdom of those who may have built before you. When I was just starting out, I spent a day with a landscape architect, dragging a 9-ft.-tall viewing platform around the site of an abandoned farm, looking for the best place to build a new house. As the sun was setting, we discovered the one spot where the views, the solar orientation, and the topography all came together. It was, of course, right in the middle of the farmhouse's ruined foundation. □

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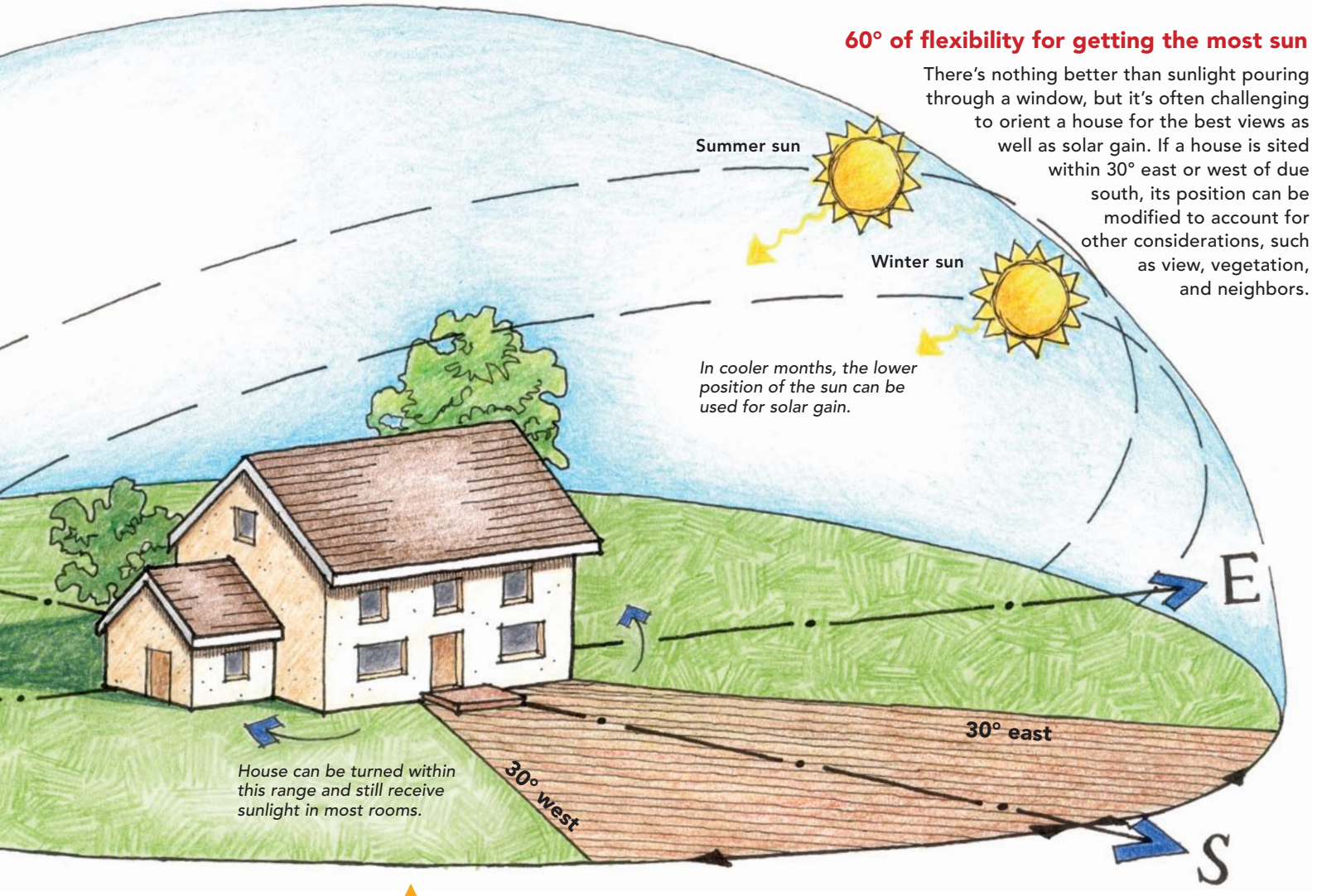
What's the best way to take

On any site, there's no more important issue than a house's solar orientation. A house and its occupants benefit greatly from lots of sun. Sunlight makes the house more pleasant and inviting, and it can give rooms a sense of drama throughout the year as the days and seasons progress.

Of course, it's not as easy as facing the house due south. I used to have a house

An architect offers some smart strategies to fix imperfect situations



advantage of the sun?

oriented at an acute angle to the south, and almost every room got sun at some point during the day, especially in the summer.

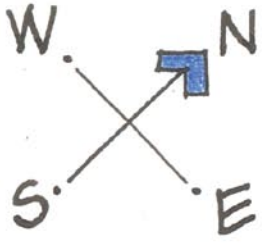
Solar orientation may not coincide with the best views, so plans may have to adjust accordingly. If you turn a house so that it faces within 30° east or west of south, you'll have 60° of play to adjust the house's location so that most or even all rooms get sun at some point during the year.

When you're investigating the way the sun tracks across your site, remember that the sun's position changes seasonally. I live in Boston, where the summer sun rises in the northeast, reaching a high point of about 70° from the horizon. The winter sun rises in the southeast, but only to about 30°. No matter where you live, you can use this seasonal movement to influence the house's design. For instance, deep eaves can keep a house cool in the summer but still allow lower winter sun to increase solar gain.

The lot is surrounded by neighbors, so where's the best place to build?

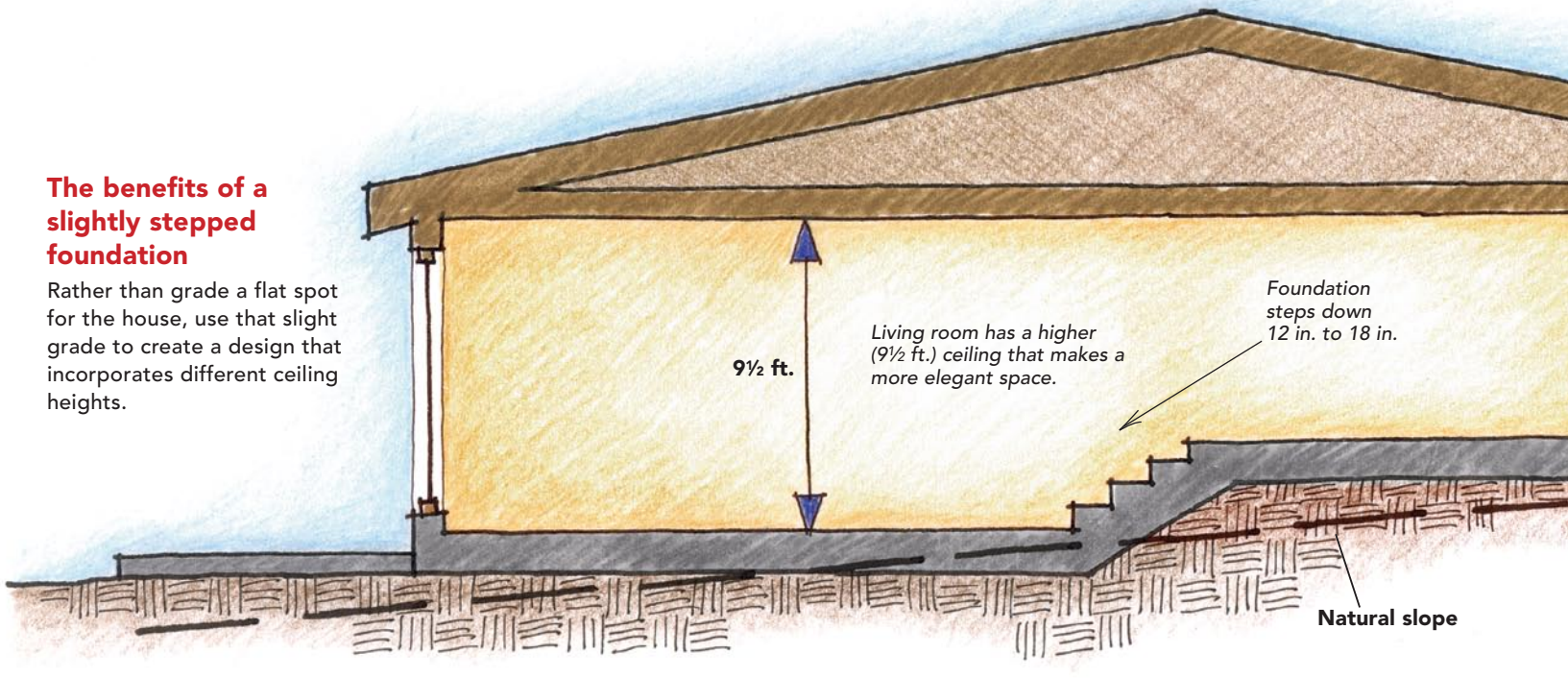
When homeowners come to me with an existing piece of property, they often bemoan the fact that houses are within their view or, worse yet, next to them. My reaction is always to tell them to be happy about it. Chances are that unless you're in a fast-changing neighborhood, the relationship of your house to those of your neighbors will remain just as you planned for years to come. After carefully examining the site's conditions and the locations of neighboring houses, site your house accordingly, using the less important sides of your house as well as landscaping to screen the neighbors.

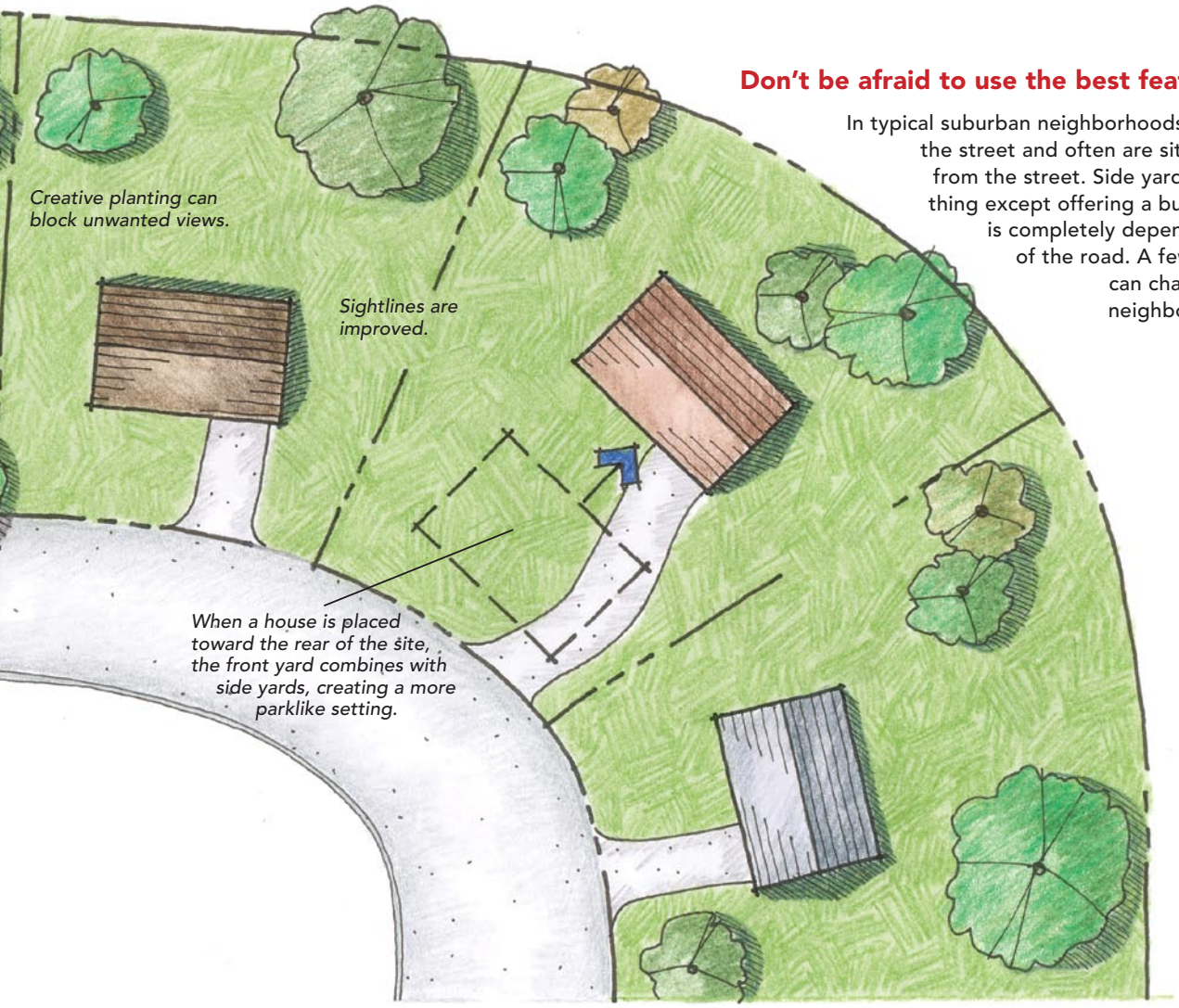
Also, houses located in denser neighborhoods don't have to occupy the same spot on each site. When I was on a recent flight, I happened to look down at a group of suburban developments. The houses all faced the curving street, separated by the same setbacks. I wondered what it would be like if all those houses were oriented to the south, or if every other house were pulled back from the street so that the front yards joined the underused side yards.



The benefits of a slightly stepped foundation

Rather than grade a flat spot for the house, use that slight grade to create a design that incorporates different ceiling heights.

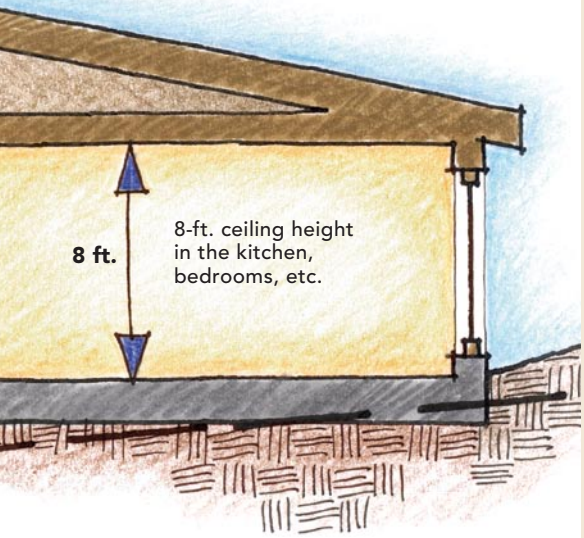




Don't be afraid to use the best features of your lot

In typical suburban neighborhoods, houses tend to face the street and often are sited the same distance from the street. Side yards aren't used for anything except offering a buffer. Solar orientation is completely dependent on the direction of the road. A few siting modifications can change the nature of the neighborhood for the better.

What do you do if the site is flat?



Is a flat site really flat? I'd lay you a dime to a dollar that what some people call a flat site is not necessarily flat; it has a little bit of a rise to it. At first glance, subdivision sites often don't seem to have much change in topography because too frequently, the existing topography has been altered drastically to ease construction. It bears little resemblance to its original state. Even in an altered state, though, the site is likely to have some change in grade.

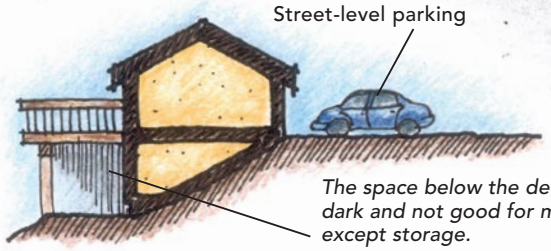
It may not sound like a lot, but you can take advantage of just a foot in elevation; stepping up or down along the grain of the site can make a house more interesting. Because he couldn't visit all his sites, Frank Lloyd Wright used to require his clients to send him topographic surveys marked to 1-ft. intervals instead of the usual 2-ft. intervals. The closer intervals gave him a better sense of the site's contours and, therefore, gave him more options for the house's design.

What if the site slopes down away from the road?

Some of the hardest sites to develop are hillsides that fall away from road level. Obviously, unless you like flooded basements, you don't want to build at the bottom of the hill. One solution is to build a tall house; another is to build a house that cascades down the hill, but there are two problems: People usually don't like a lot of level changes, and in the case of multistory houses, many towns have height restrictions.

Another common attempt to solve this problem is to situate the garage at the front of the house near the street. People in this situation often say they want a walk-out basement, but they also want a deck that cantilevers out from the back, which creates unusable space, a dark cave under the back of the house. Instead, I think it's best to bring the driveway around the side of the house and to stick the garage under the house. This move improves the curb appeal of the house as well: You're not looking at the garage from the street.

Typical approach



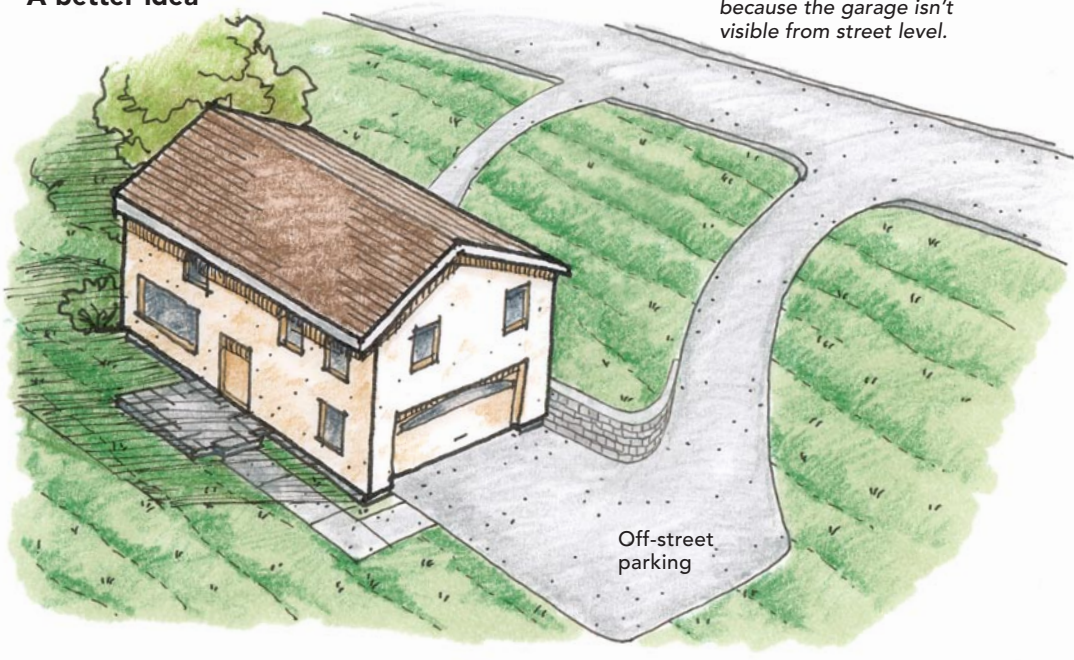
The space below the deck is dark and not good for much except storage.

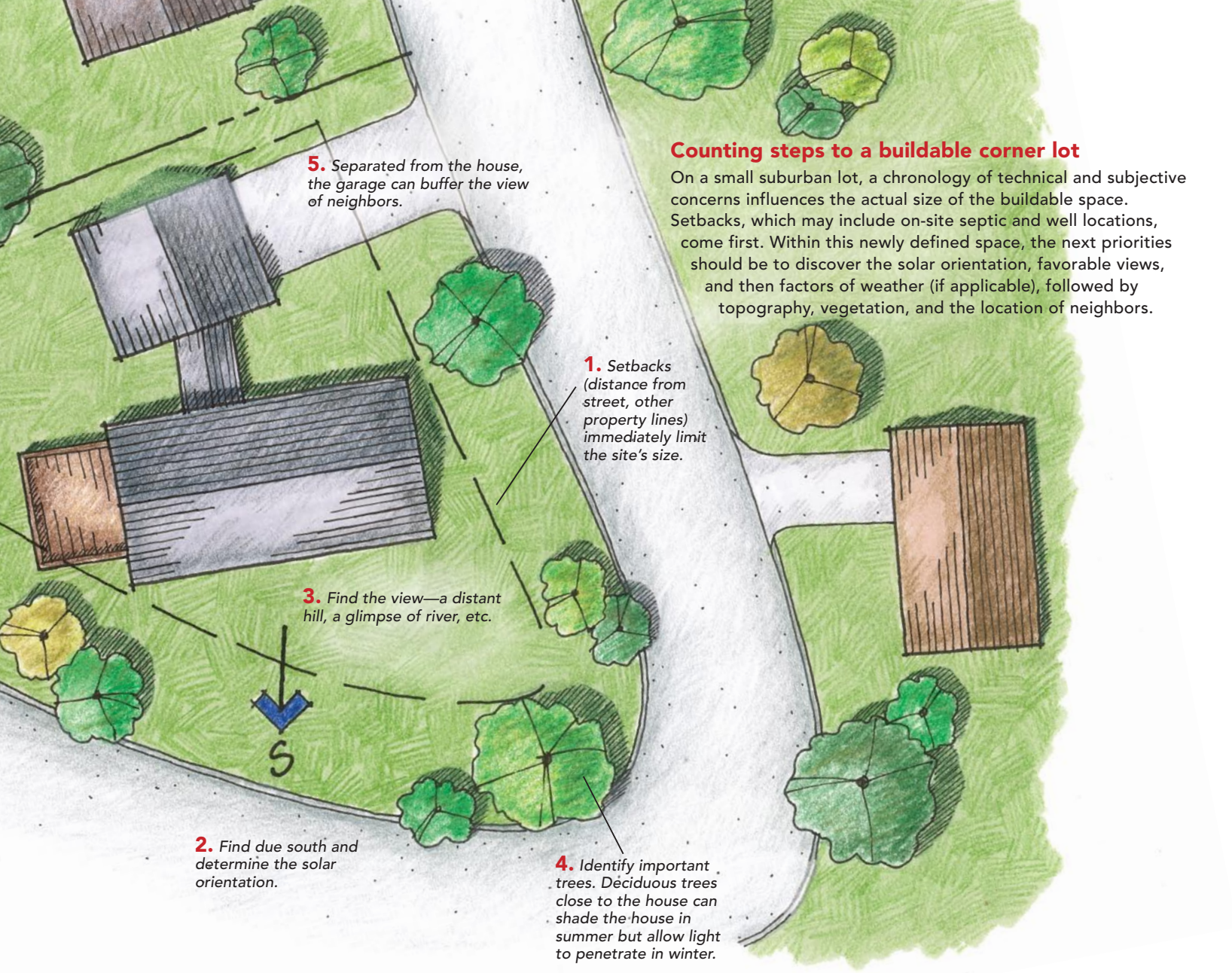
Use the back of the house on downslope lots

A common response to a downslope lot has been to situate the garage or parking area between the house and street. Built on the slope, the house usually has a walk-out basement that's often covered with a cantilevered deck. The space below the deck is dark and not likely to be used. Instead, bring the driveway around the side of the house and use part of the basement for garage space. The house's front exterior isn't cluttered with parked cars, and the basement becomes a more useful space.

A better idea

Curb appeal is improved because the garage isn't visible from street level.





Counting steps to a buildable corner lot

On a small suburban lot, a chronology of technical and subjective concerns influences the actual size of the buildable space. Setbacks, which may include on-site septic and well locations, come first. Within this newly defined space, the next priorities should be to discover the solar orientation, favorable views, and then factors of weather (if applicable), followed by topography, vegetation, and the location of neighbors.

How do you site a house on a corner lot?

The corner lot is always a difficult situation because it is isolated. Bounded by road on two sides, the lot's access is often in question, and there's little room for a backyard. It's a location where we can see all the factors of siting come into play in one place.

Here's the first thing that I ask when I look at a corner lot (or, for that matter, any site of an acre or less): What is the buildable footprint? How is it determined? First, you have to consider the inflexible issues of setbacks and zoning regulations; right away, the footprint has become smaller. Setbacks give minimum requirements, but they should be considered only a starting point in siting a house.

Next, consider a logical list of site characteristics: solar orientation, local weather, topography, vegetation, neighbors. The footprint is getting smaller. If city utilities are available, there are limited considerations, but the need for a well and septic system has a deeper impact on the final location of the buildable footprint. The good news is that even in a constrained plan like this, if you pay careful attention to the site and its relationship to its surroundings, you're going to build a better house.