

## Q What's the correct height for chair rail and wainscot?

A Gary Katz, editor of *ThisIsCarpentry* and a presenter at JLC Live, responds: The short answer to this question is, somewhere between 26 to 32 inches. The long answer might make you regret asking the question.

The height of wainscoting and chair rail depends on many things: the style of the home, the size of the room, the height of the ceiling, as well as your personal opinion of what looks good. For all these items—other than your own aesthetics—there are rules and rules and more rules. But unlike some

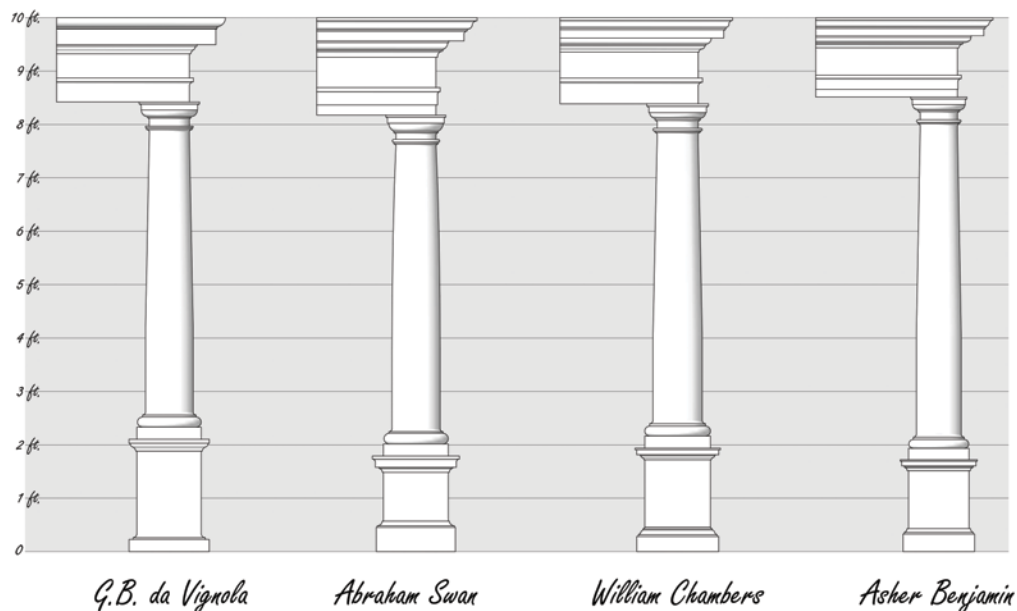
rules—such as which fork to use or to always wash your hands after using the bathroom—design rules can be interpreted in many different ways, which means they aren't really rules, but rather more like guidelines.

### CLASSICAL ORIGINS

The placement and proportions of the moldings we install in our homes are meant to replicate those of a classical column. Wainscoting (also called a dado or dado wall paneling) is supposed to mimic the pedestal of the column. Chair rail represents the molding that caps the top of the pedestal. Contrary to what many people think, the height of chair rail should not match the height of a chair back just because it's called "chair"

## TUSCAN ORDER

*By Author*



Four architectural authors—G.B. da Vignola, Abraham Swan, William Chambers, and Asher Benjamin—each produced a slightly different interpretation of the proportions in the Tuscan Order.

Illustration by Todd Murdoch



In a classic historic home, the wainscot, or dado, is at the same level as the window sill, for a continuous line around the room (1). Tall paneling is not considered to be wainscot, but rather wall paneling with a plate rail on top (2).

rail. In fact, nothing could be further from the truth, because the height of chair rail (and of wainscot) follows the rules of classical proportion.

These rules have been interpreted in different ways by different authors over time, and the results are still remarkably similar. In most cases, the top of the wainscot and the height of the chair rail is much lower than the back of a typical chair. To find out why, let's first take a quick look at how the classical orders came about. These orders are loosely based on the human form. I underscore the term

“loosely” because there is no perfect human form—there are tall people and short people, people with long legs and people with stubby legs, heavy-set folks and folks that are skinny. So you can't simply measure someone's foot at random and say that it would represent the perfect diameter of a column. Yet starting with Vitruvius (who published the earliest known book on architecture, more than two millennia ago), many writers have offered their own take on the rules of proportion based on the classical orders.

## CLASSICAL INTERPRETATIONS

All of the classical orders are important in architecture, but let's use the Tuscan order as an example because it is the simplest and least adorned of the group. In the illustration on the previous page, we see how four major architectural authors—Giacomo Barozzi da Vignola, Abraham Swan, William Chambers, and Asher Benjamin—interpreted the rules of proportion and design for the Tuscan order. Some authors stipulate that the pedestal, or dado, should be one-fifth the height of the order (or room), while others say that the pedestal should be one-third the height of the column. In this group, da Vignola's pedestal is the tallest and Swan's pedestal is the shortest. But because Swan's entablature is also the lowest, his column is proportionately similar to da Vignola's. Asher Benjamin borrows Swan's pedestal design and then creates his own unique entablature.

So who's right? I believe the truth is closer to what William Chambers said in his *A Treatise on the Decorative Part of Civil Architecture*, published in 1791: “With regard to the proportion which their height ought to bear to that of the columns they are to support, it is by no means fixed, the ancients, and moderns too, having in their works varied greatly in this respect, and adapted their proportions to the occasion, or to the respective purposes for which the pedestals were intended.” In other words, do what looks best in whatever room you're working on, which means your wainscoting should be a suitable height for your room.

Personally, I tend to favor Abraham Swan's design, maybe because he started as a carpenter and joiner and became an author only after he had gained sufficient experience in the field. In his 1757 work, *Georgian Architectural Designs and Details*, Swan explains: “There is hardly a greater error in architecture, than in disposing the dadoes and the entablature to the height of the rooms. When the entablature is too large, and the dado too high, the room appears lower than it really is, whereas a light entablature, and the dado of a moderate size, gives height to the upper panel.” The translation: When wainscot is taller than it should be, it makes the ceiling seem lower than it actually is.

One truly wonderful thing about the pragmatic Mr. Swan was his recognition that dado height also determines the height of the window sills (or vice versa). In the 18th century, chair rail was actually window stool. As builders of Georgian homes attempted to follow the rules of classical design, they placed window sills or stools at the same height as the dado, resulting in one continuous line of molding around the room defining the top of the pedestal and the bottom of the window (1).

In most colonial homes, including neoclassical designs from the

Georgian and Federal periods, the wainscot cap and window sills share the same profile and height, again creating one continuous line at pedestal height around an entire floor. In the photo, taken at the Gardner-Pingree home, in Salem, Mass., the two parlors share the same stool and wainscot cap, creating a single line that visually connects the two spaces.

In some historic homes I've visited, particularly those with very tall triple-hung windows, the wainscot is barely 2 feet off the floor. In one home in the Southeast, the wainscot was a mere 21 inches from the floor (I measured it). And I worked in one colonial home in Los Angeles, of all places, in which the wainscoting was 23 inches above the floor. In each of those instances, the wainscot seemed visually proportionate to the rest of the trim details and to the height of the room.

Coming from a carpentry background, Abraham Swan explained simply and practically that if the wainscot—and the stool—is too high, it spoils the view. Visitors must stand right next to a window in order to see the ground outside the building. His solution expressed in the book referenced earlier is the best and most basic approach that I've found: "If the Room be 10 feet high, I should think about 2 feet 5 inches would be a moderate height for the dado; and for every foot that the room is higher than ten, let  $\frac{3}{4}$  inch or  $\frac{7}{8}$  inch at most, be added to the dado. This method has had a good effect, and has been much approved by some skillful judges and persons of good taste."

## FAST FORWARD TO THE PRESENT

Of course, Swan's clear-cut answer typically does not solve the problem of wainscot height in contemporary homes, which are notorious for confused interruptions in every elevation. We have all visited homes where the tops of doors and windows aren't even in one straight level line, often with an inch or more difference in the window and door heights. I rarely see a contemporary home where the windows share the same sill height throughout an entire floor or even in a single room, and in most homes built these days, the wainscot is higher than the window sills.

This situation presents a variety of design and molding installation complications for finish carpenters, such as how to resolve the chair rail directly into the window casing. Finish carpenters' lives could be a lot less difficult if they just adopted the classical rule of keeping the sills and the wainscot at the same height.

And what about all that so-called "wainscot" we see in contemporary houses that is 4, 5, and even 6 feet from the floor (2), and the "chair rail" that caps that detail? Actually, that wall treatment is not a dado or wainscot at all. That detail is known as wall paneling and is often capped by a plate rail—which is traditionally a flat, narrow piece of trim with a groove cut into it for displaying plates. In some Arts & Crafts homes, corbels or modillion blocks support that rail. But Swan's visual rules still apply here: If you run the wall paneling high, the ceiling will seem lower than it is, an effect that can be purposeful.