

Bay Window Do's and Don'ts

by Clay Johnson

Angled bay windows started showing up on American houses during the Gothic revival movement in the mid 1800s, and have been a popular architectural feature ever since. Still, there are enough bay windows tacked on to otherwise attractive houses to conclude that many builders and designers treat the bay window as an afterthought. Yet with a few basic rules under our belts, we can design bay windows that are not only functional but that enhance the exterior elevation of the house.

From the Inside Out

Historically, bays were thought of more as an exterior adornment than an interior feature. But homeowners spend most of their time indoors looking out, so the first step in designing a bay is to make it work from the inside.

It's useful to compare a bay window with a flat picture window. When we step into a room with a flat picture window, we instinctively line ourselves up to look through the window at a 90-degree angle. Shallow viewing angles create glare and reflection that interrupt a clear view, so when we want to enjoy the view through a picture window, we will arrange ourselves directly across from the window, regardless of whether we're close to the window or across the room.

With a bay window, however, the two flanking windows are normally set at an angle of 30 to 45 degrees from the front. In order to look directly through those side windows as well as the center window, we will step forward into

Bay Window vs. Picture Window

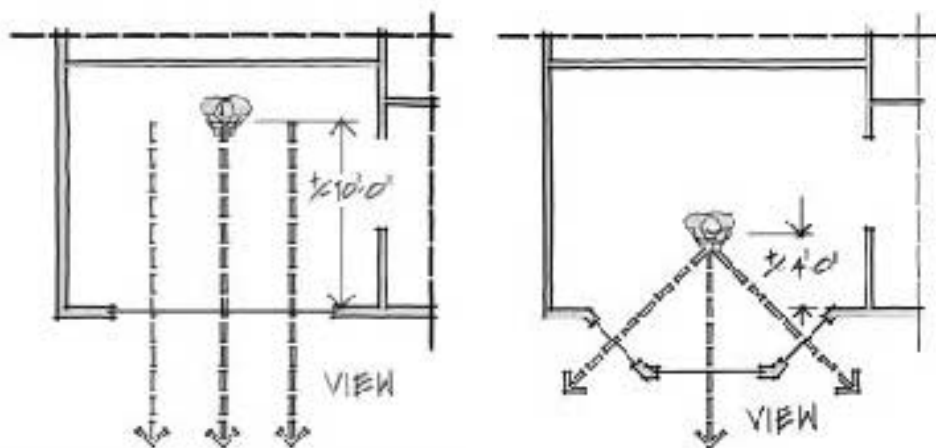


Figure 1. People looking through windows tend to position themselves perpendicular to the glass for the best view and to avoid glare. With picture windows, it's possible to do this from deep within the room (left). With bay windows, the viewer is drawn forward to get the panoramic view through the side windows (right).

Sizing a Bay Window

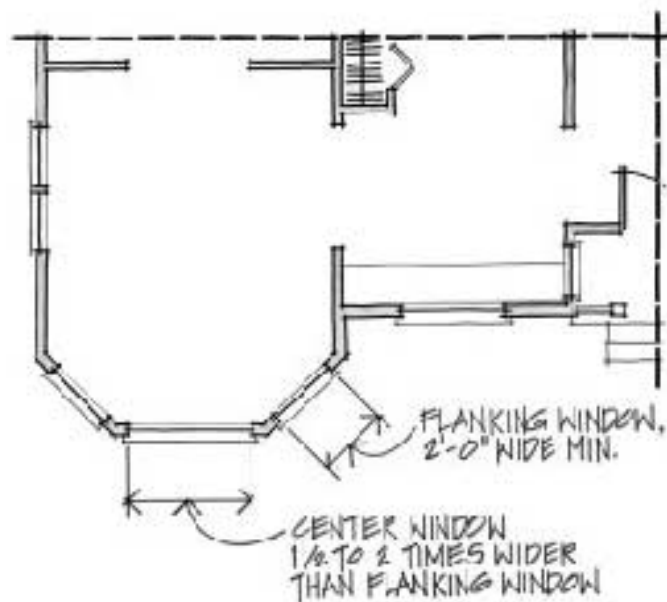


Figure 2. The flanking windows in bay units should be at least 24 inches wide (36 inches for sliders). The center window should be 1½ to 2 times the width of the side windows.

Bay Windows From Outside

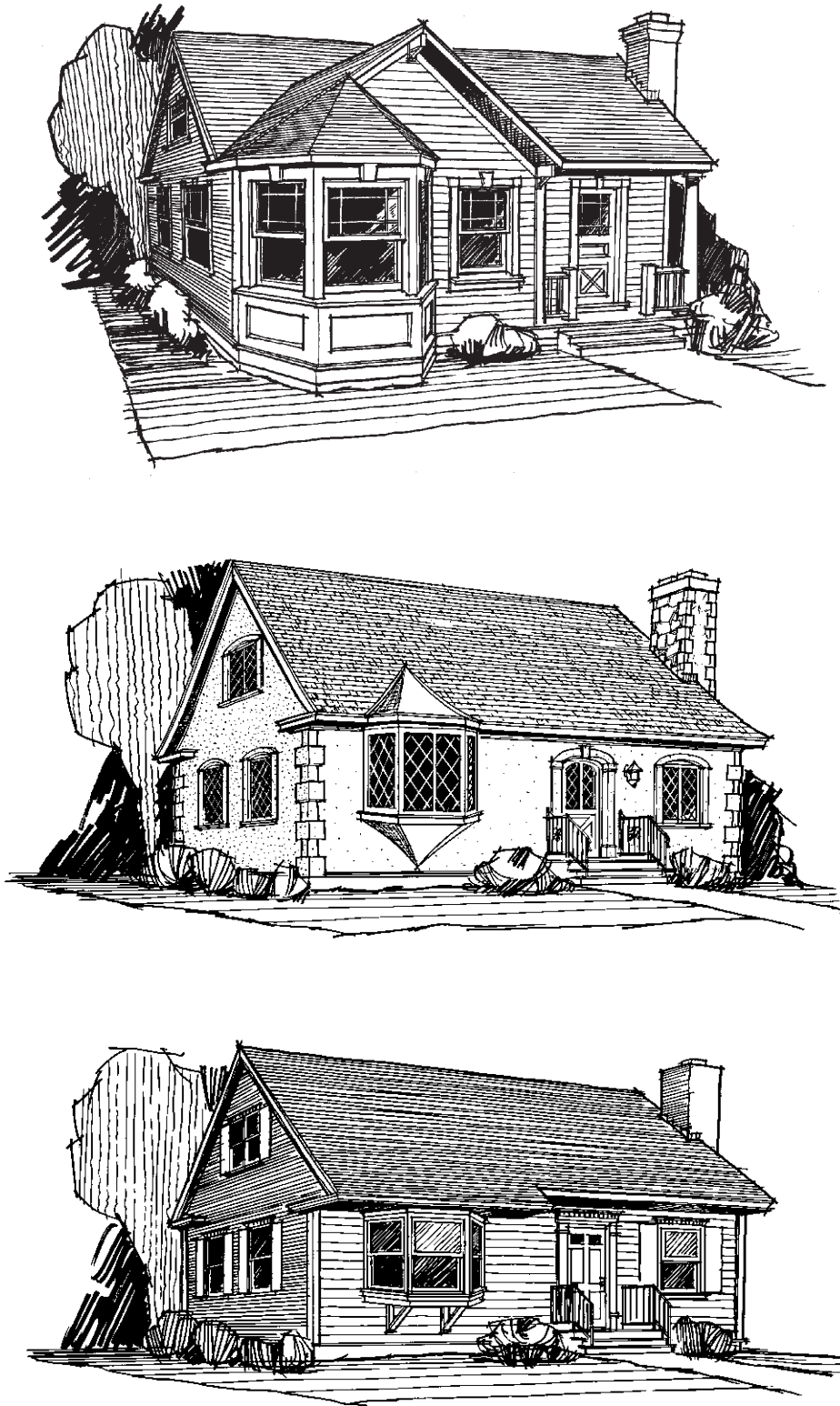


Figure 3. From the exterior, bay windows break up a flat expanse of wall and provide an opportunity to add a gable or hip roof over the bay itself. The bay can be placed off-center under a small gable, balanced by another element, like the large window shown here (top). On a side wall, the bay roof can be an extension of the main roof (center), or if small enough, tucked beneath the eaves (bottom).

the center of the area encompassed by the bay to enjoy the panoramic view (see Figure 1).

Sizing the Windows

This leads to two rules for designing bays. First, plan the space so that the area in front of the bay is open. Second, make the flanking windows wide enough to actually see through. A 24-inch-wide flanking window is the minimum for casement or double-hung windows used in traditional home styles. If you're using sliders, keep the flanking sliding units at least 36 inches wide to avoid narrow vertical sashes.

The most pleasing proportion for the center window, both from inside and outside, is $1\frac{1}{2}$ to 2 times the width of the flankers. On a small bay window, you can match the flanking window size, but be careful, because symmetrical bays can wind up looking like narrow turrets — a vertical element that you may not want.

How Tall?

Bay windows can either extend to the floor or stop short of the floor with a deep sill or window seat. Having the floor extend into the bay window enlarges the floor area and expands the possibilities for furniture arrangement. For full-height bays, I prefer the traditional 45-degree angle. When it's large enough, the bay window can become an alcove with both floor space and a built-in window seat.

When conditions mandate a shorter window with a deep sill or window seat, it's best to use the 30-degree flanking windows: The shallower projection makes for a more comfortable seat or more useable sill.

Sill Height

I design bay window sill heights first with the view in mind. A 30-inch sill provides a good view when sitting near the window. If the window is on the second floor and the view is lower than the floor level, for example, a river or the ocean, then a 24-inch sill opens up the view and still leaves a nice reveal for a 15-inch-high window seat. In a

larger alcove, where furniture may be pushed against the walls of the bay, then standard 36-inch sills may work. Be sure to check with local codes for safety and fire egress before finalizing sill heights — upper floors will be subject to fire egress limitations for high sills and may also require fall protection for low sills.

From the Outside

A bay window with its own hipped roof is a strong architectural feature, particularly when the roof is an extension of the main house. When located in a gable wall, bay windows are often centered for convenience, but placing the bay off-center can be effective if it's balanced with another strong feature. The top sketch in Figure 3 illustrates how pushing the bay window all the way to one side helps to blend the bay into the building. It also magnifies the interior effect to have the bay the full width of the room, rather than breaking it up at the center (Figure 2).

A bay window can also break up a long section of plain eaves wall. The most common method is to build a gable roof over the bay and let the bay be the most prominent feature on that side of the building. If the bay window does not project beyond the eaves, it's possible to slip the bay under the main roof, making it a more subtle feature.

Anchoring the Bay

Viewed from the outside, a bay window should look like it's supported, rather than just sticking out of the building. Some of the pre-assembled bay windows offered from major window companies have cable support systems that hold up the outside corners, making it structurally feasible to let the bay project out with no support underneath, but this is an aesthetic mistake. If a full foundation is impractical or the window is on an upper floor, use either heavy ornamental timber brackets or a framed skirt tapered back to the wall.



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