

What is the difference between a ridge beam and a ridge board?

A Cole Graveen, a senior engineer with Raths, Raths and Johnson of Willowbrook, Ill., responds: Stated very simply, a ridge beam supports vertical roof loads while a ridge board does not. Both are roof framing members that are located at the peak formed where two sloped roof areas intersect. However, a ridge beam is a structural member that receives a vertical load from roof rafters and transmits the load to structural supports. A ridge board is not a structural member; its primary purpose is served during construction to make it easier to install the rafters.

A ridge beam is commonly used when the space immediately below the roof framing is open to the interior, such as with vaulted ceilings. Either a ridge beam or a ridge board can be used with flat, recessed, or tray ceilings that create an attic space between the ceiling joists and the roof rafters.

Ridge beams support the upper ends of the roof rafters (at the peak) and span between structural supports such as posts or columns. If the rafters are simple span members between the ridge and

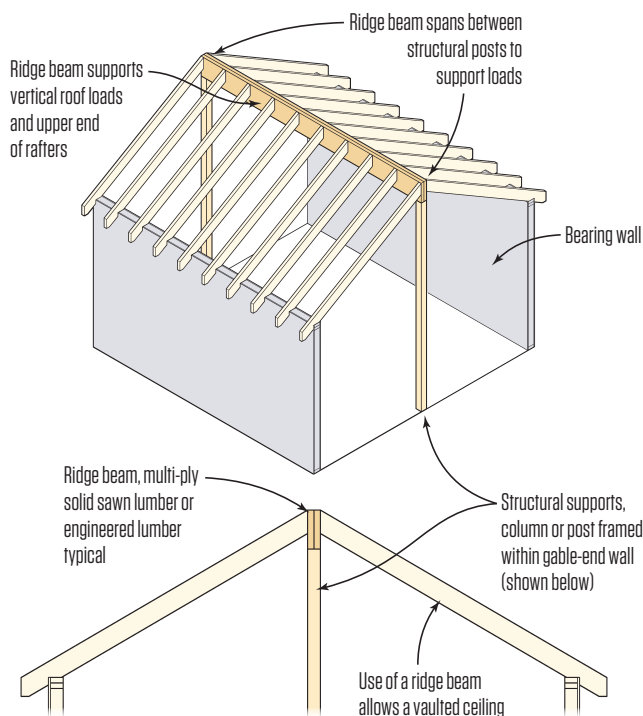
bearing walls (as shown below), the ridge beam will support one-half of the roof area. In order to support the imposed design loads (dead, roof live, and snow), the ridge beam will need to have a larger cross section than the rafters do, and in conventional light-frame construction, it will typically be a multi-ply or engineered member.

A ridge board joins the ends of opposing roof rafters. During the construction of the roof, it supports the peak end of the rafters both vertically and laterally. Typically, the ridge board is set to its intended position and temporarily supported. Then the rafters are placed in pairs, one on each side of the ridge board. This method allows for small offsets between the rafter ends that would not be possible if there were no ridge board and the opposing rafter ends butted up to each other at the peak.

In the completed roof structure using a ridge board, the lower end of the roof rafter is connected to a rafter tie that resists the outward thrust. The rafter tie spans parallel to the rafters and connects each pair of rafters at the bottom end, creating a triangle with the two roof rafters. The rafter tie is in tension, resisting the outward thrust force, while the ridge board at the roof peak is compressed between rafters, serving as an infill piece. Ceiling joists may double as rafter ties.

Ridge Beams vs. Ridge Boards

Ridge Beam (Structural)



Ridge Board (Nonstructural)

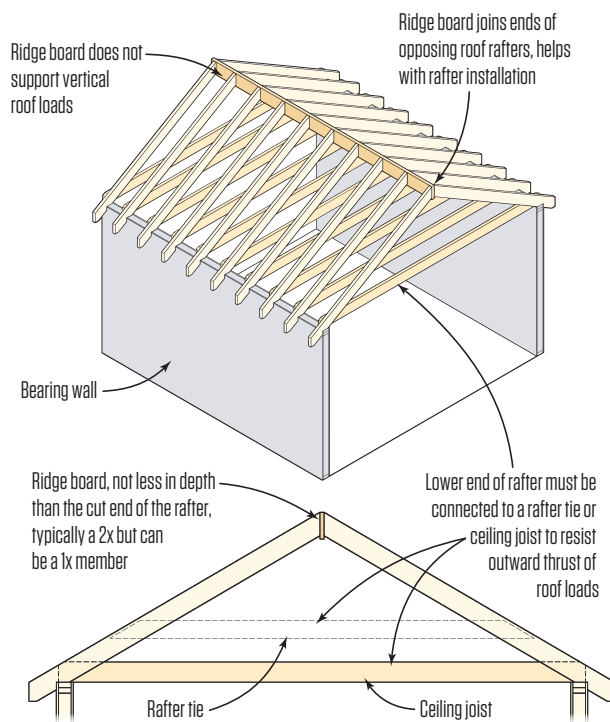


Illustration: Tim Healey