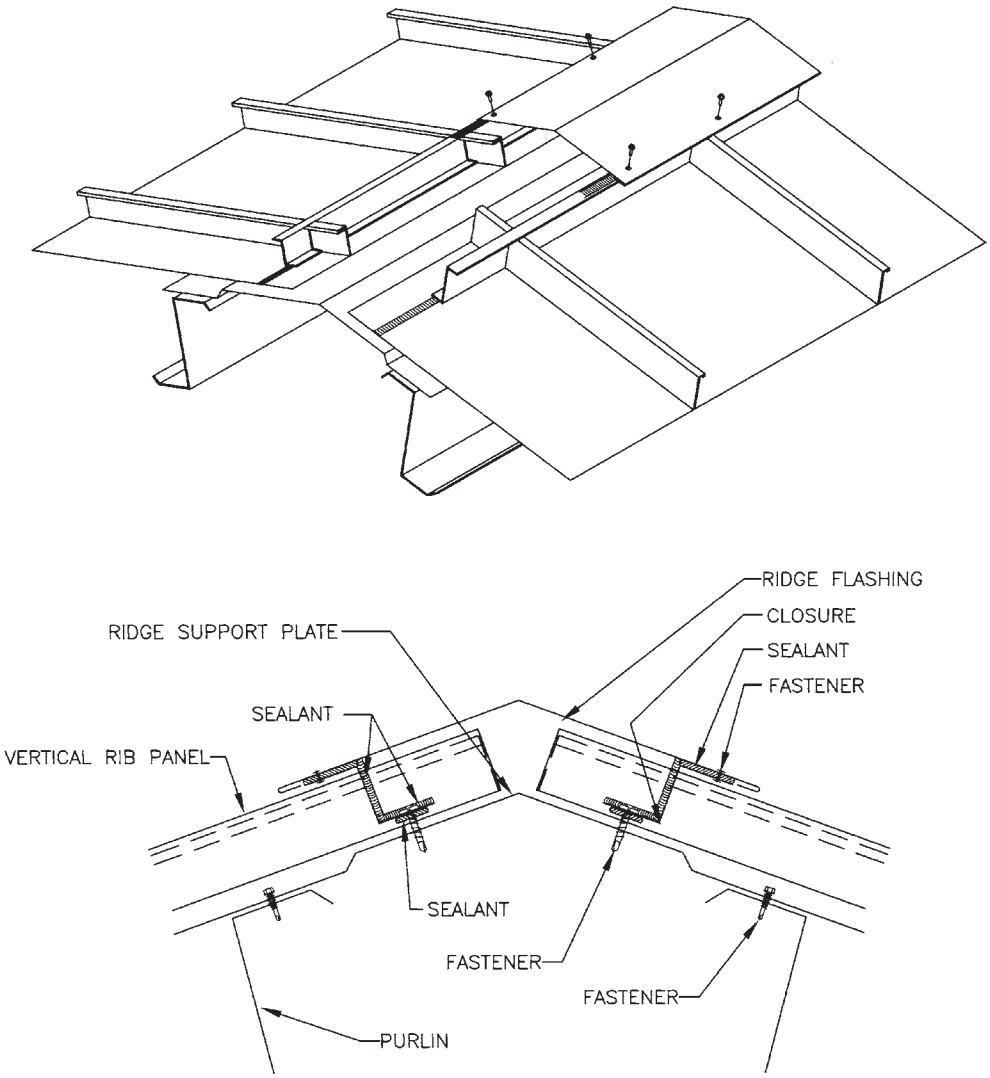

FIGURE 6.36 Details of vertical-rib roofing at nonvented fixed ridge. (*MBMA.*)

roofing from moisture, its number one enemy, and from pollution. Durable is the finish that does not peel, crack, or discolor for a reasonably long period of time. A good fading resistance is especially important for roofs in sunny locales, where ultraviolet radiation often destroys darker colors, such as reds and blues.

6.8.1 Anticorrosive Coatings

The most popular anticorrosive coatings for steel roofing are based on metallurgically bonded zinc, aluminum, or a combination of the two. ASTM Specification A 924 covers both zinc and aluminum applied by the hot-dip process.

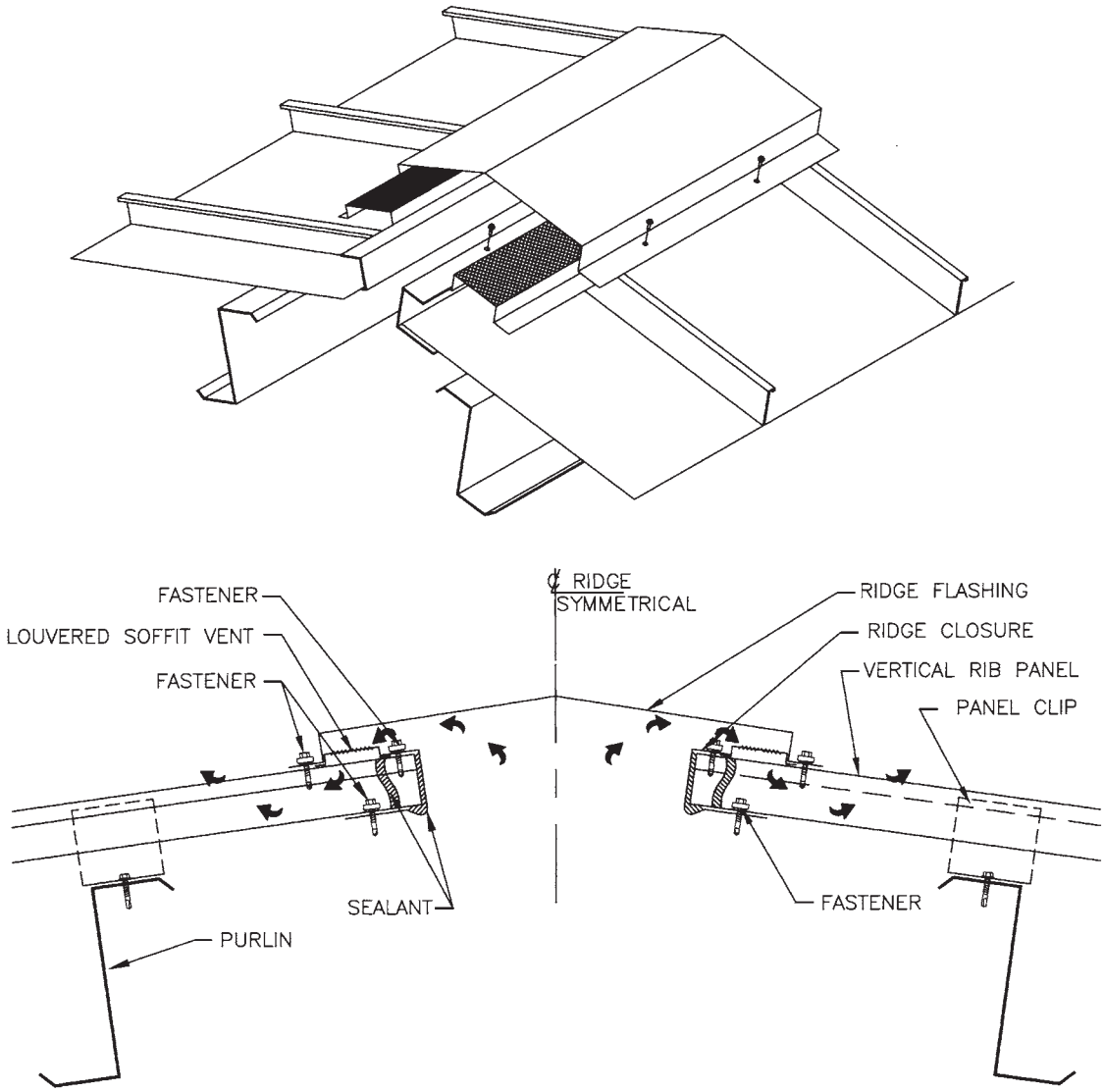

FIGURE 6.37 Details of vertical-rib roofing at vented floating ridge. (*MBMA.*)

Zinc coating, found in the familiar galvanized steel, relies primarily on a sacrificial chemical action of zinc, slowly melting away while protecting the underlying metal. Obviously, the thicker the layer of zinc, the longer the protection; a coating conforming to new ASTM A 653[22] with a G60 or G90 designation is adequate for most applications. The G90 coating contains 0.9 oz/ft^2 of zinc—a total applied to both sides of the sheet—and measures about 0.001 in per side. In addition to its sacrificial protection, galvanizing provides a barrier against the elements, although this action is secondary. The barrier action is helped by a white film formed by the products of zinc oxidation. Mill-galvanized steel has a familiar shiny spangled finish, while the appearance of hot-dip galvanized finish is rough and dull. According to some estimates, hot-dip galvanized panels may lose about $^1/_2$ mil of the coating thickness every 5 years.