Creating a Custom, Balanced Roof Ventilation System

When Maywood Elementary School decided to reroof four of their ve buildings, they called on the architects at Fanning Howey for assistance. They found that the roof had no ventilation underneath the roof covering, which can easily lead to problems such as ice damming, increased cooling costs, moisture buildup and early shingle failures.

To avoid these problems and create a cool roof system, Fanning Howey recommended ventilating the roof and installing a vented nailbase. However, a vented nailbase was only part of the solution. They still needed to get air into the system at the eave and then exhaust the hot air the ridge.

A Ventilation Challenge

To help them tackle the issue of creating intake venting where none previously existed, they contacted Metal-Era. Based on the dimensions and other roof conditions, Metal-Era•s technical department calculated that 24 in.2/lf of net free area (NFA) would be required. To achieve the intake ventilation, 1,848 lineal feet of Hi-Perf Vented Fascia was selected. The next question to address was how to provide enough exhaust ventilation for the facility•s hipped roofs.

•When ventilating, it is important to create a balanced system, meaning equal amounts of intake and exhaust ventilation. It•s notoriously dicult to achieve this in hipped roofs because the eave to rake ratio is essentially nonexistent. A traditional length of ridge vent just won•t work, so we needed to explore other options,Ž says Joe Inzeo, Senior Process Engineer at Metal-Era.

Working with the architect, Metal-Era•s engineers developed a custom peak vent t(rk)-16.c-12.8ee area (NFAipp83.3

A Field Test

Garry Maris of Maris & Son Roo