

# Tarco ROOFER'S REPORT



## Tarco Metal Roof Underlayment in Paradise: *No Ka Oi*

**T**arco's metal roofing underlayment is *no ka oi*, says Richard Foust, the president of Hawaii Metal Roofing LLC. That means "the best," he explains.

Hawaii Metal Roofing LLC is a manufacturing company that supplies roofing contractors and sheet-metal companies with high performance Surelock® standing seam metal roofing panels and accessories. The company was founded in 1998 and incorporated by Richard Foust in 2010.

Metal roofing is quite popular in Hawaii, with about 25 percent of the commercial buildings and an ever growing percentage of the residential construction in the Aloha State opting for metal roofs. "One of our metal roofing systems is installed just about every week," says Foust.

Foust learned about Tarco from Hawaiian contractors who have been using its underlayment for many years. Based on the positive remarks from his customers, Foust adopted Tarco underlayment for

use with his metal roofing products. "We recommend Tarco for all low-slope and steep-slope roofs that receive our Surelock panels," he says. "Saturated felt still is showing up in project specifications; however, we consistently recommend Tarco underlayment products (such as LeakBarrier PS200<sup>HT</sup> or EasyLay®) for superior performance."

### Secondary Water Barrier

According to Foust, Tarco's PS200<sup>HT</sup> underlayment perfectly complements the metal roofing panels that he sells. "It's like belts and suspenders," he explains. "The underlayment provides a watertight secondary membrane while the metal panels serve as the primary roof." The primary roof, he further explains, protects against wind-blown objects as well as UV radiation, which are the main vulnerabilities of membrane roofing.







*The Safeway Shopping Center in Honolulu, which includes the largest Safeway on the Hawaiian Islands, used Tarco PS200<sup>HT</sup> underlayment under the metal roofing.*





Meanwhile, if the primary roof is damaged, the secondary roof acts as a water barrier.

The Surelock standing seam roofs are also designed to be waterproof but, in case there is a leak, it is vital to have a secondary water barrier to minimize any consequential damage to the interior of the building and allow ample time for repairs to be made.

"Believe it or not, Hawaii is in a hurricane zone," says Foust. The Surelock panel product line has been thoroughly evaluated by structural-engineering performance testing per current industry standards including TAS100-95 Test Procedure for Wind and Wind Driven Rain Resistance, subjecting the Surelock system to 110 mph wind-driven rain. Testing was performed by Farabaugh Engineering and Testing Inc., McKeesport, Pennsylvania. "Hawaii is a long way from Miami but our roofing systems could meet the Miami-Dade building code requirements," he adds.

Foust looked at some synthetic underlayments as well but found them lacking in several ways. "The quality was not commensurate with the quality of the metal roofs that we sell. Without naming names, some of those synthetic underlayment products were too flimsy."

Another advantage that he likes about Tarco underlayment is that it self-seals around fasteners. "There is no way the water is going to seep around the nails," he says. "Also, the Tarco underlayment lays down easily. Only a roller is required. It lays down fast and once it is installed it can be exposed for up to 120 days, which helps a lot with manpower issues. The building contractor needs us to dry in the building as soon as possible. With the self-adhering underlayment the roofing contractor can provide a waterproof membrane within a matter of days and that covering can be left exposed for weeks or months until the metal roof is installed. That makes it easier for our customers to schedule their projects."

Temperatures in Hawaii seldom get too high or too low, so the roof installers don't have to deal with temperature extremes. "PS200<sup>HT</sup> handles extremely well in the 70 to 80 degree Fahrenheit temperature range which is typical around here," says Foust.

Two recent metal roofing projects were the Ewa Beach Safeway (Store #2897) installed by Leeward Roofing and General Contracting; and the Beretania Street Safeway (Store #2944) installed by Beachside Roofing. LeakBarrier PS200<sup>HT</sup> metal roofing underlayment from Tarco was used by both contractors.

## Roofing the Safe Way at Safeway

One metal roofing project that reaped the benefits of PS200<sup>HT</sup> metal roofing underlayment is the Safeway Shopping Center at 1234 South Beretania Street, Honolulu, Hawaii 96814. The newly constructed store (Safeway #2944) also happens to be the largest Safeway on the Hawaiian Islands. This store has a parking garage below it in part because of its location in a densely-populated neighborhood of Honolulu. Across the street is the old Safeway store, now repurposed for use as a Petco and Walgreens pharmacy, which during remodeling also utilized Surelock panels.

The metal roof was installed by Beachside Roofing, a roofing contractor who installs many Surelock metal roofs. Beachside Roofing has been doing business in Hawaii for more than 25 years and the company prides itself as being expert in high rise buildings, resorts and complex projects. The company installs all kinds of roofing and waterproofing systems.

The 20,000 square foot metal roof on the Safeway store had to meet strict color requirements in keeping with the Safeway brand. The color of the roof is "gargoyle," which is greenish-brown.



Scott Ai, VP for Estimating at Beachside, explained that the metal roofing was designed to be installed over corrugated 20-gauge steel decks. Tarco worked on and approved a design in which the underlayment could be installed directly on the metal deck.

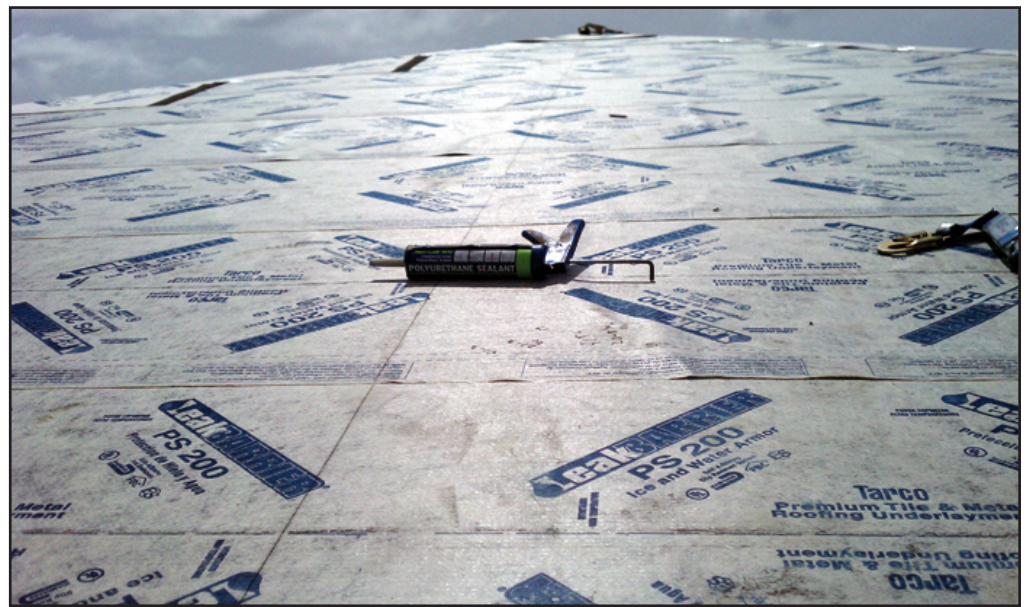
The metal deck (HSB-36SS type) was installed with the wider corrugations face up and parallel to the eaves (horizontally). The self-adhering underlayment also was installed horizontally and the Surelock panels were then attached to the horizontal corrugations of the deck using Surelock panel clips and self-drilling fasteners penetrating through the underlayment into the flat top of the corrugations of the steel deck.

Ai states that the walkability of the underlayment is excellent, which was an important factor, considering that the roof slope was 4 inches per 12 feet in some places. He said also that the 120-day exposure allowance for the underlayment was reassuring, although not necessary for this project.

The metal roofing system included many architectural elements such as canopies, penthouses and mansards. It covers not just the Safeway supermarket but also other shops in the Safeway Shopping Center. "The way the metal was used architecturally really dressed up the exterior of the project," says Ai.

### Many Climate Zones

The roof on the Safeway store is a hydrodynamic design, which means gravity removes the water from the roof and so it is not susceptible to ponding. Honolulu receives an average of 22 inches of rain per year which is not insignificant. Thus, the secondary water barrier capability and the long-



exposure limits were important factors in selecting the self-adhering PS200<sup>HT</sup> for this project.

The Hawaiian Islands are noteworthy for their many climate zones. While moderate temperatures and moderate rainfall are predominant in Honolulu, the climate zones around the big island of Hawaii vary from tropical to subarctic. There is snow in the mountains in the winter and certain micro-climates can experience more than 100 inches of rain per year. Many residences of the affluent are built in "the Heights", where the temperatures are typically cooler and the scenery is spectacular.

Surelock metal roofs have been installed on hospitals, retail stores, schools and residences throughout the Hawaiian Islands. Hawaii Metal Roofing also leads the way with several LEED applications, including a project at the University of Hawaii. In many places in Hawaii, there is no water service, so it is desirable to collect rainwater for non-potable uses

such as watering plants. Metal roofing systems are well suited for this. LEED credits are also accrued on the basis of recycled content and energy efficiency.

Foust is drawn to Tarco products as the perfect complement to high performance Surelock standing seam metal roofing panels and accessories. "We receive consistently positive feedback from our customers and repeat sales due to ease of installation, walk-ability and cooler surface temperature," he concludes.

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