Finding the Right Drone Provider  PG 34
The Jimmy & Rosalynn Carter Work Project Visits Canada  PG 60
Exploring Building Codes After Historic Storms  PG 24
Quality Service, Honesty and Great Workmanship Carry Mid-Western Commercial Roofing, Inc. Well into its Fourth Decade in the Deep South  PG 66
Spin2Win Points at IRE Booth 701
In roofing, they say "It rains every night," which means that no matter how much gets done on a reroof project, at the end of the day the entire roof must be completely watertight before the crew can leave. Shane VonWald knows a thing or two about reroofing, he's been doing it for more than 27 years. Starting out as a second set of hands in his stepfather's residential roofing business, he quickly rose through the construction laborer ranks from journeyman to foreman to superintendent before moving into project management and estimating for a large contractor. Today, VonWald leads the commercial roofing division at Signature Roofing, a specialty contractor serving the Boise, Idaho area since 2002. The firm's roots, like VonWald's, are in residential roofing. Determined to break into growing local markets in public works and large private projects, Signature Roofing brought VonWald into a new commercial division in 2013.

"Commercial roofs can be quite a bit more complicated than residential projects," said VonWald. He estimates Signature Roofing does approximately 20 commercial roofs a year, ranging from public schools and municipal buildings to retail centers and office complexes. Signature Roofing's residential division, on the other hand, focuses on smaller projects.

PROJECT PROFILE:

Flexibility, Affordability, and Ease of Use Define Material Selection on an Elementary School Reroof Project in Boise, Idaho

By Tamara Middleton
Roofing turned to ACH Foam Technologies' Foam-Control® PLUS+® protrusions using a customizable material. HSA and Signature directionally-controlled roof slope to eliminate ponding also requires in the field just about as much as on paper. “Creating a consistent, can’t be done exclusively on the drafting table. It has to be defined to add a significant amount of slope to get it to drain properly. This continued Robinette. “There was a lot of ponding and we needed to add two feet of parapet wall, building up higher than we originally expected to get the slope we needed.” The Signature Roofing team used a hand-held hot wire cutter to shape the molded polystyrene insulation to fit around the mechanical equipment and roof drains, all of which also had to be raised up to account for the new roof height.

VonWald suggests that while architects may appreciate molded polystyrene for being somewhat less expensive than polyiso insulations, he appreciates molded polystyrene for being easier to install. “It is faster, with polyiso you have to build up layer after layer to get your roof-height. With Foam-Control® PLUS+, a single piece is 12 inches deep and you can do it all in one shot.” Not having to build up layer after layer saves time and money, while also reducing material waste. On large commercial roofs with significant slope built-up of more than 3 or 4 inches, like the Maple Grove Elementary, the savings can be as much as 20 percent over polyiso products.

Molded polystyrene’s insulating properties compared to polyiso are not as immediately apparent at the purchase point. While ACH Foam Technologies’ Foam-Control® PLUS+®’s R-value per inch of thickness ranges from 4.2 to 4.5, comparable polyiso products represent a published LTTR R-value of 5.6 per inch of thickness. The blowing agents used in polyiso provide an initial high R-value. During the life of the material, air from the atmosphere diffuses into the cells and reduces the R-value. The blowing agents themselves also diffuse out of the material, further reducing the R-value. This is known as off-gassing.

In 2010, Mark Graham, the National Roofing Contractors Association (NRCA) associate executive director of technical services, confirmed that relying on long-term thermal resistance (LTTR) values may be misleading to designers. “Although the LTTR method of R-value determination and reporting may be appropriate for laboratory analysis, research comparison and procurement purposes, NRCA does not consider LTTR to be appropriate for roof system design purposes when actual in-service R-value can be an important aspect of roof system performance.”

The NRCA recommends designers use in-service R-values of 5.0 per inch in heating conditions and 5.6 per inch in cooling conditions for polyiso. Molded polystyrene insulation, on the other hand, doesn’t suffer from off-gassing and therefore retains the originally published R-values over the entire life of the product, without change. Available in compressive strengths of 15, 25, 40 or 60 psi, with a warranted R-value that maintains its effectiveness for 50 years, ACH Foam Technologies’ Foam-Control® PLUS+® roof insulation proves to be flexible in more ways than one.

Tamara Middleton is a roof insulation specialist with ACH Foam Technologies.