



Basalt Elementary School

90-Mil EPDM Roof With Class A InvinSA® FR Roof Board Earns 30-Year Guarantee

Case Study: JM EPDM roofing system protects high-altitude institution and its students



Description: Nestled between world class ski resorts and gold medal trout streams in the Roaring Fork Valley outside Aspen, Colorado, is the quaint town of Basalt—more than a mile high and with more than its share of weather challenges: snowstorms, wind and cold, followed by intense sun. The Roaring Fork School District had been struggling for years with roof systems that didn't meet expectations or stand up to the repeated weather assaults.

Challenges: "We became connected with an independent roof consultant, John Hesslink, through other school districts on Colorado's Western Slope. His thorough research and persistence in seeking the remediation and resolution of our roofing issues saved us a lot of money," reported Shannon Pelland, assistant superintendent. "So, when it was determined the elementary school needed a new roof before the end of summer, the district, again, sought John's advice. Given a choice of assemblies with varying specs and guarantees, our preference was a high-performance, longer service roof and roof guarantee. We trusted John's research and recommendation for replacing our long-standing 'preferred' system with one better suited to our environment."

Solution: The new fully adhered, extruded Johns Manville EPDM system will withstand Basalt's weather extremes and provide exceptional ozone resistance at its 6,600-foot altitude. "It's the right choice where the number of heating days far exceed cooling days. And, snow melts a lot faster on a roof with high solar absorption," remarked Hesslink. "Stored snow is a potential mischief maker." Positive drainage was achieved by a combination of tapered insulation crickets sloping at ¼" per foot and 8-foot, square sumps at each drain. The sumps were formed with four ENRGY 3® preformed valley panels sloping at ½" per foot.

Specification for the wood and metal deck assemblies was the same, with one exception: JM's InvinSA FR replaced standard InvinSA over the wood deck, securing a UL® Class A fire-rated solution and a 30-year No Dollar Limit Peak Advantage® Guarantee. The JM 90-mil EPDM membrane fully adhered to InvinSA earned additional coverage for wind speeds up to 70 miles per hour.

"For years, I'd been searching for an alternative cover board that could withstand considerably more moisture, and InvinSA came along," said Hesslink. "Our crews prefer using InvinSA 10-1," added Pat Leingang, superintendent with United Materials. "It's lighter, easier to set in place, haul around, cut and lay. Our crews come to me and ask, 'Why can't we use InvinSA board? Why not? We don't get as tired... It kills us to carry gyp board around. We much prefer InvinSA.' I know InvinSA saved us a couple of days of labor on this job."

Location:

Basalt, Colorado

Building Representative:

Roaring Fork School District

Shannon Pelland,
Assistant Superintendent

Roof Consultant:

Division 7 Design, Inc.

John Hesslink, President

Roofing Contractor:

United Materials, LLC

Beth Gloss, President
Paul Rouse, Vice President
Pat Leingang, General Superintendent
JM Peak Advantage® Summit Club® Contractor

Roofing System Solution: SE9A

30-Year Peak Advantage® Guarantee

ENRGY 3® Roof Insulation
InvinSA® and InvinSA® FR Roof Board
JM EPDM 90 mil, Nonreinforced,
Fully Adhered



Reaping the rewards of JM's revolutionary Invinsa® and Invinsa® FR Roof Boards

"There is now a far better way to get maximum performance out of your roof," according to John Hesslink, president of Division 7 Design, Inc., and specifier of the Basalt Elementary School's new JM EPDM roof system. "I was pleased to find a cover board that stands up to moisture as well as Invinsa does." Hesslink is putting advances in both materials and roofing techniques to work for his customers. He specified that Invinsa be adhered to JM polyisocyanurate insulation with ribbons of JM Two-Part Insulation Adhesive, preventing thermal transfer at the fasteners and eliminating the possibility of fasteners backing out and puncturing the membrane in the future.

For the contractor and building owner, Invinsa's lighter weight provides savings at every step:

- More squares per truckload mean fewer truckloads and lower fuel costs.
- Loads in up to 50% less time requiring less crane rental time and charges.
- Eliminates the need for expensive, oversized equipment; a small crane can reach out over the roof and load lightweight Invinsa close to where it is needed.
- And it can be left in place – a real labor saver. Heavier cover boards require repositioning this dead weight around the roof. Not Invinsa.
- Invinsa allows fast, easy scoring around penetrations, leaving practically no dust – an especially important benefit in a fully adhered EPDM system.
- It offers simplified fitting at curbs, valleys and ridges, and fast, easy linear and circular cuts.
- There's virtually no waste.
- Using Invinsa can literally save days on a job.

For the Roaring Fork School District, an Invinsa cover board provides an extra layer of protection between their thermal investment and the waterproofing membrane. Invinsa means peace of mind and long-term roof performance.

| | Gypsum | Invinsa |
|--|--------|---------|
| Roof Product Loading: | | |
| Thickness | ¼" | ¼" |
| Number of Squares | 385 | 385 |
| Board Dimensions | 4'x4' | 4'x4' |
| Loading Labor (hours) | 12 | 3 |
| Crane Rental (hours) | 3 | 1.5 |
| Product Layout: | | |
| Number of Squares per hour | 10 | 15 |
| Product Cutting: | | |
| LF of Linear Cuts | 1,000 | 1,000 |
| Time to Cut 1 LF (seconds) | 4 | 2 |
| Number of Circular Cuts | 45 | 45 |
| Time to Cut One Circular Cut (seconds) | 50 | 25 |
| Clean-Up Time (hours) | 6 | 3 |
| Miscellaneous: | | |
| Lbs of Waste to Landfill | 375 | 90 |

Comparison approximations provided by roofing contractor, United Materials, LLC.



Invinsa FR maintains all the benefits of standard Invinsa with the added benefit of UL® Class A certifications for single ply systems installed over combustible decks.

JM Invinsa is the cost-effective cover board choice.