



Build Smarter. Any Day. Every Day.

Bozeman, Montana experienced its most frigid and snowiest February in the city's history in 2019. Snowstorms produced nearly 30 inches of snow. While certainly inconvenient, the work did not stop for Langlas & Associates, and their construction team. They were busy building a new state of the art high school for the Bozeman community. Langlas & Associates is a family owned, Montana based, general contracting company which has serviced the Midwest and West Coast since 1973.

In a place like Montana, working conditions on a building project can range from subzero temperatures to extreme heat. Knowing the building project would be taking place throughout the winter, Josh Henigman, superintendent at Langlas & Associates, and his team had to be sure to select products that would withstand the extreme cold and frigid temperatures that were sure to come. The decision was made to utilize 3M's Air Barrier products because they are specially formulated to be applied at temperatures ranging from 0°F to 150°F (18°C to 66°C) – meaning the cold weather wouldn't hinder the building process.

Breaking Ground

In spring 2018, ground officially broke on the 300,000 square foot project. Cushing Terrell is the architectural firm that designed the project. Knowing the impacts a large building like this has on the environment and also knowing research proves that students learn better in schools with good lighting, clean air and comfortable classrooms, they wanted to incorporate green building practices from the Collaborative for High Performing Schools (CHPS) program. CHPS provided the Cushing Terrell team with the guidelines to design a high performing, environmentally conscious school. Once completed, Bozeman Gallatin High School will be one of more than 700 schools across the country recognized by CHPS.

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- Nathan Helfrich, Architect

Nathan Helfrich, the project architect from Cushing Terrell Architects, explained which factors were considered when selecting the specific products that were used throughout the building process. "We choose products based on what we think is going to perform the best given our environment. The 3M Air Moisture Vapor Barrier was key for this project because, with the temperature swings, we had to be very focused on air and moisture transmission in the building envelope," he said.

Another factor that made a difference to the entire project team was 3M's ability to be on-site and help answer technical questions when needed. "One of the things I've appreciated the most about 3M is 3M's willingness to come out on site and educate our site crew on exactly how to install the product, go through those key features and really just specify the correct product to make sure that we have a super tight building envelope," explained Helfrich.



Progressing Through a Snowy Winter

Winter weather can hold up even the most important of projects. The team experienced the challenges of a freezing work environment firsthand. “In a climate like Montana, Bozeman in particular, average temperatures fall in the 20s and teens for a couple of months out of the year,” says Henigman. “We even experienced a solid two weeks of sub-zero temperatures during the build.” While the team was used to Montana winters, February of 2019 was exceptional and marked the city’s fourth coldest February on record, as well as the snowiest February in the city’s history!

“3M™ Air and Vapor Barrier 3015 fit our specifications and was chosen due to its ability to be applied in lower temperatures,” Henigman says. “The biggest driver of choosing this specific product was not having to put on a primer. That in itself has limitations with temperature and weather.”

The 3M Air Barrier portfolio is designed with a proprietary backing that can be exposed to the environment for up to 12 months and an acrylic adhesive that can be applied in temperature ranging from 0°F to 150°F without a primer while handling a service temperature range of -40°F to 240°F.

“In and around that cold snap we were still putting 3M 3015 on,” says Henigman. With more than 100,000 square feet of walls to cover, the team needed a product with excellent adhesion without having to take valuable time to apply a primer. This allowed the team to move more quickly and efficiently through the cold months and still stay on schedule.

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- Josh Henigman, GC
Superintendent



Flashing Forward

In June 2020, Langlas & Associates will turn over the keys to the school’s facilities team. After incorporating many 3M products throughout the Bozeman Gallatin High School project, Henigman and team now have a secret weapon they can rely on to Build Smarter. Any Day. Every Day.

Credits

General Contractor: Langlas & Associates
Architect: Cushing Terrell
Distributor: Edge Construction Supply
Photography: Art of Flight Media

Learn more on how 3M can help you build smarter, even in the winter, at <http://go.3M.com/buildsmarter>



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