

Roofing and Waterproofing Case Study: Milwaukee Public Schools

Project Name: Milwaukee Public Schools

Location: Throughout Milwaukee

Consultant: S.R.I.

Year Completed: Ongoing

Square Footage: Ongoing

The Milwaukee Public Schools consist of 178 schools. Combined, they account for more than 86 million square feet of roofing. Roofing foremen Dennis Fula, Jim Coney and a staff of three other professional roofers are responsible for keeping all those roofs in shape. There are a images from various jobs included in this document; a case study of one is detailed below.

Situation

The roofing division at MPS (Milwaukee Public Schools) had been looking for a coating to solve a specific challenge for years. 20 years ago, roughly 250,000 sq.ft. of skylights had been coated with 2" of spray polyurethane foam (SPF). Over the last 5 to 10 years the SPF has been cratered by UV and the elements. It began absorbing water like a sponge.

Challenge

Dennis Fula and Jim Coney had a worst case scenario. Year after year, more and more SPF was failing. The saturated foam was getting dangerously heavy on top of the glass skylights. They wanted to find a way around the labor of tearing off the foam and the dangers of breaking the glass substrate in the process. The insulative properties of the SPF kept the heat loss in the buildings at a minimum as well.



Before



After



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Because of frequent summer thunderstorms, the SPF was always wet, causing numerous coatings to blister, pop, and fail.

Strategy

Neptune Coatings advised MPS to pressure wash the skylights clean, remove the delaminating topcoat from the foam, and tarp the skylights to allow them to dry out prior to the first job. The foremen, Dennis and Jim, chose to disregard all prep on the first 8000 sq.ft. and challenge Wetsuit with a "worst case scenario" situation. The soggy, dirty foam received only a "once over" with a leaf blower. On heavily cratered foam, the Wetsuit 1-Part material was used because of its slow cure and self leveling properties. On the smoother faced foam, Wetsuit 2-Part was used because of its instant cure.

Results

As Neptune Coatings predicted, the Wetsuit blistered rapidly in the summer heat, vaporizing the water that was saturating the SPF. Dennis Fula just smiled and nodded his head with satisfaction. "I knew the Wetsuit would blister because of the conditions, all the other coatings did too, but Wetsuit was the first product that blistered but didn't pop!!" Indeed, the 1600% elongation simply ballooned out, vaporizing the water upwards and allowing it to pass out the vents that were installed around the skylights. When all the water vapors were out, the blisters just settled out and the Wetsuit was silver top coated. The ease of application and small crew, gave MPS the labor savings they were looking for as well as a lightweight, monolithic



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membrane that solved a problem that had been nagging them for years. MPS was so happy with the product that they have begun using it in other roofing and waterproofing applications throughout the school district.

Dennis and Jim agree, "the thing we like about Wetsuit is that there are so many ways to use it. We always test products under worst case scenarios to expose their weak points, that way we know how to limit human error and get the best results in the future. Wetsuit really proved itself to us over this last winter. Being water based and having no VOC's we can apply the product while school is in session and we also like how when it burns, it carbonizes and doesn't drip, providing an added safety for the kids."

