

West Roofing Systems, Inc.

2007 Berea City School District Re-Roof Project Berea, Ohio



Installer: **Brian Chavalia/Jeff Johnson II**



Project Description:

West Roofing Systems, Inc. installed new SPF roofs on 11 buildings at 9 different locations in 3 different cities for a local school district in northeast Ohio. This re-roofing project consisted of 522,595 square feet. 137,595 square feet were gravel-surfaced built-up roofs and 385,000 square feet were EPDM single-ply roofs that required removal of the membrane and underlying insulation assembly before the ½" high-density wood fiber board could be mechanically fastened.

The new SPF roof system installed consisted of 1.5" of WDG 3009-3 spray polyurethane foam and WDG 3009-3 Soy spray polyurethane foam. The base coat utilized was WDG HSS 535 Solvent-Free Silicone and WDG HSS 540 R2R™ Solvent-Free Silicone Coatings installed at 20 mils thick in one pass. The top coat utilized was WDG HP 465 Silicone Coating installed at 10 mils thick with 3M Ceramic Granules broadcast into the top coat at a rate of 40 pounds per square. The sealants used were WDG 7-702 R2R™ Silicone Sealants. The owner was issued a 20 year full-system renewable warranty.

The equipment utilized is as follows:

- (6) Gusmer H-2000 foam proportioners
- (4) Graco 45:1 Bulldogs coating rigs
- (4) Silver Eagle Robotic applicators equipped with Computerized Auto-slope Technology.
- (1) 19 Ton Simon Stinger Crane
- (1) Guzzler vacuum truck



The average crew size was 24 men and the project duration was 72 calendar days. That equals over 7,200 square feet of finished roof completed daily. Our contract required final completion prior to the beginning of the school year. This was accomplished with 3 days to spare.

Benefits of using Foam:

1. The State of Ohio sponsors a program for its schools to perform improvements to major energy consuming building systems. The building systems employed must conserve enough energy to pay for themselves over 10 year period. The SPF roof system with high R-value and cost effective installations is an approved system for this energy conservation improvement and totaled 1/3 of the entire improvement employed by the school district.
2. It would have been very difficult for other roof systems/contractors to have met the tight timeline for this size of installation. The school district's Director of Facilities said "I am confident that if any other system/contractor had been utilized, only half of the desired roofing would have been completed".
3. WDG HSS 535 Solvent-Free Silicone Coating was used as a base coat on 360,000 square feet of new SPF roofing. The use of this environmentally responsible product prevented the release of approximately 3,000 gallons of solvent into the atmosphere. That's enough petroleum to drive a family sedan around the world 3 times.
4. Approximately 15,000 square feet of SPF insulation on one of the High schools was manufactured from Soy base polyol in lieu of petroleum based polyol.
5. Approximately 8,000 square feet of silicone roof membrane was manufactured using recycled EPDM roof membrane. The materials were removed from a school building in Kentucky, processed at a facility in Ohio, and then incorporated into the silicone coating used at an Elementary school. This process is referred to as "ROOF TO ROOF" (R2R™).
6. 10,000 square feet of EPDM membrane was removed from a roof at the high school and is being recycled into new roofing products.
7. 40% of the standard polyol used in the manufacturing of the SPF insulation was post-industrial recycled or renewable.
8. All of the drums containing the polyol insulation materials were purchased recycled and were further recycled to contain new roofing products.
9. Geo-thermal energy was used in the production of the polyol blend for the SPF insulation.
10. A portion of the roofing materials purchased is being allocated to a scholarship fund at Ferrum College for new students majoring in environmental sciences. The Environmental Sciences program at Ferrum is a national leader in environmental education, second only to Stanford.
11. The School District's 2007 Re-roof Project did a lot more than insulate and waterproof 11 buildings. The District has provided an example to the students, community, other school districts and businesses of social and environmental responsibility.



Industry Excellence Awards

Category: Roof Foam Greater Than 40,000 sq. ft.