



## MEETING THE SPECIAL CHALLENGES OF REROOFING

Lutheran Bible Institute  
Providence Point, Washington

Everyone knows that reroofing projects come with their own specific set of problems. The challenge of completing a tear-off, correcting chronic problems with the existing roof, and applying a new system is compounded by the presence of building occupants.

To the Lutheran Bible Institute of Seattle (LBIS), ensuring that their students' work could continue uninterrupted by roofing tear-off and asphalt fumes was critical. LBIS is an accredited college that offers Bachelor of Arts and Associate degrees with majors in biblical studies/pre-seminary, youth and family ministry, cross-cultural missions, early childhood and Christian education, and pre-counseling. Built in the 1940s, the institute sits atop Providence Point in Washington State. Its coal tar and gravel roof, over thirty years old, was leaking and had simply outlived its useful life.

### DEFINING THE PROBLEMS

The Lutheran Bible Institute was faced with a classic reroofing situation. An old, leaky roof needed to be replaced. Ponding water had been a chronic problem for years, and the situation had to be corrected. Because the facility would be occupied throughout the course of the project, the disruptive nature of reroofing was a key concern. And of course, cost was a factor. After doing some roofing research on their own, LBIS contacted Wetherholt and Associates, a respected Washington-based roofing and waterproofing consulting firm serving commercial and institutional building owners in the Pacific



Northwest. Wetherholt analyzed their client's needs, and then began to search for viable solutions that would correct the existing roof problems and address the institute's concerns about the student population and project cost.

### FINDING A SOLUTION

Wetherholt recommended a single source system that would answer all of Lutheran's roofing needs: Siplast NVS lightweight insulating concrete and Paradiene 20 TG/ 30 TG SBS-modified bitumen membrane.

For over twenty years, NVS (Non-Vented Substrate) concrete has been the obvious choice for reroofing. NVS was developed to solve reroofing problems economically. Like Siplast's Zonolite, NVS is a composite system that combines the unique properties of aggregate-based lightweight insulating concrete and Insulperm premium expanded polystyrene foam insulation board, creating a monolithic, nailable substrate ideal for use over existing roof systems.

### INSTALLING THE SYSTEM

It was determined that NVS could be poured directly over the Lutheran Bible Institute's existing roof without affecting the integrity of the assembly; there were no problems with weight loads. Pouring NVS directly over the coal tar roof saved the dust, debris, and noise of a complete tear-off. It also saved considerable demolition and labor costs.

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Additional height was added to the existing parapet to facilitate an effective NVS slope-to-drain design, assuring positive drainage. After removing the gravel, making necessary repairs, and replacing all wet areas, the NVS pour began. The NVS slurry coat corrected the imperfections in the substrate that had been contributing to the ponding problem. Then, Insulperm insulation boards, placed in a stair-step configuration, created a slope-to-drain contour that effectively removes water from the roof's surface. Finally, a top fill of NVS was poured over the Insulperm, filling the holes in the Insulperm and locking it into the system without the use of fasteners.

After a normal curing time, application of the Siplast Paradiene 20 TG/ 30 TG SBS-modified bitumen membrane system began. The system is lightweight, highly flexible, simple to apply, and easy to maintain. It has an enviable performance history in some of the harshest weather conditions imaginable. This performance is enhanced when the membrane is installed over NVS lightweight insulating concrete, because NVS reduces thermal and mechanical stress on the membrane. The application of a base sheet with specially designed NVS fasteners was followed by torch application of Paradiene 20 TG – the base ply of the Siplast multi-ply elastomeric roofing system. Siplast's TG products have a patented grooved torching surface that allows more reliable torching than traditional flat-surfaced products. The grooves provide air channels beneath the film which make quicker, more complete plastic burn-off possible. Finally, the finish ply, Siplast's granular-surfaced Paradiene 30 TG, was torch-adhered. By using torch grade products, the issue of asphalt fumes was completely avoided. The student population was not bothered by the smell of a kettle.

The Lutheran Bible Institute now has a new roof that solves their needs in terms of application, performance, and cost. It's a classic reroofing story – and a classic example of the benefits of reroofing with Siplast NVS lightweight insulating concrete.

## **FOR MORE INFORMATION**

For more information on Siplast NVS lightweight insulating concrete and the Paradiene 20 TG/30 TG system, contact your local Siplast Representative or call toll free 1-800-922-8800.

Visit the Siplast Web site at [www.siplast.com](http://www.siplast.com) for product information, guide specifications, MSDS, commercial product data sheets, job photos and profiles, and a sales representative directory.