CARLISLE SYNTEC SYSTEMS

FleeceBACK® RL™ TPO
RapidLock Membrane

CASE STUDY

Carlisle's RapidLock TPO Makes Cold Temperature Application Possible

JOB PROFILE

PROJECT LOCATION:
» Omaha, NE

CONTRACTOR:
Scott Enterprises

BUILDING OWNER:
» Henry Doorly Zoo

ROOFING SYSTEM:
FleeceBACK RapidLock (RL) TPO
InsulBase Polyiso Insulation
InsulBase RL Polyiso Insulation

Omaha's Henry Doorly Zoo and Aquarium is a sight to behold. With 160 exhibits covering 130 acres and housing nearly 1,000 species, the Henry Doorly Zoo has been ranked among the top three zoos in the world, according to multiple travel and journalism outlets, including USA Today. It is no wonder that more than a million people travel to Omaha each year to see this animal-lovers haven.

With its ever-increasing popularity and annual volume of visitors, the management team at the Henry Doorly Zoo is constantly considering improvements and expansions to its facilities to provide both its visitors and its furry residents with an ever-enjoyable experience. The zoo's latest improvement project, which is still in progress, is the addition of a new section known as Glacier Bay Landing. This vibrant, new area, scheduled to be completed in the spring of 2019, will feature an outdoor pavilion, a play area for children, and a variety of concessions.

800-479-6832 | P.O. Box 7000 | Carlisle, PA 17013 | Fax: 717-245-7053 | **www.carlislesyntec.com**

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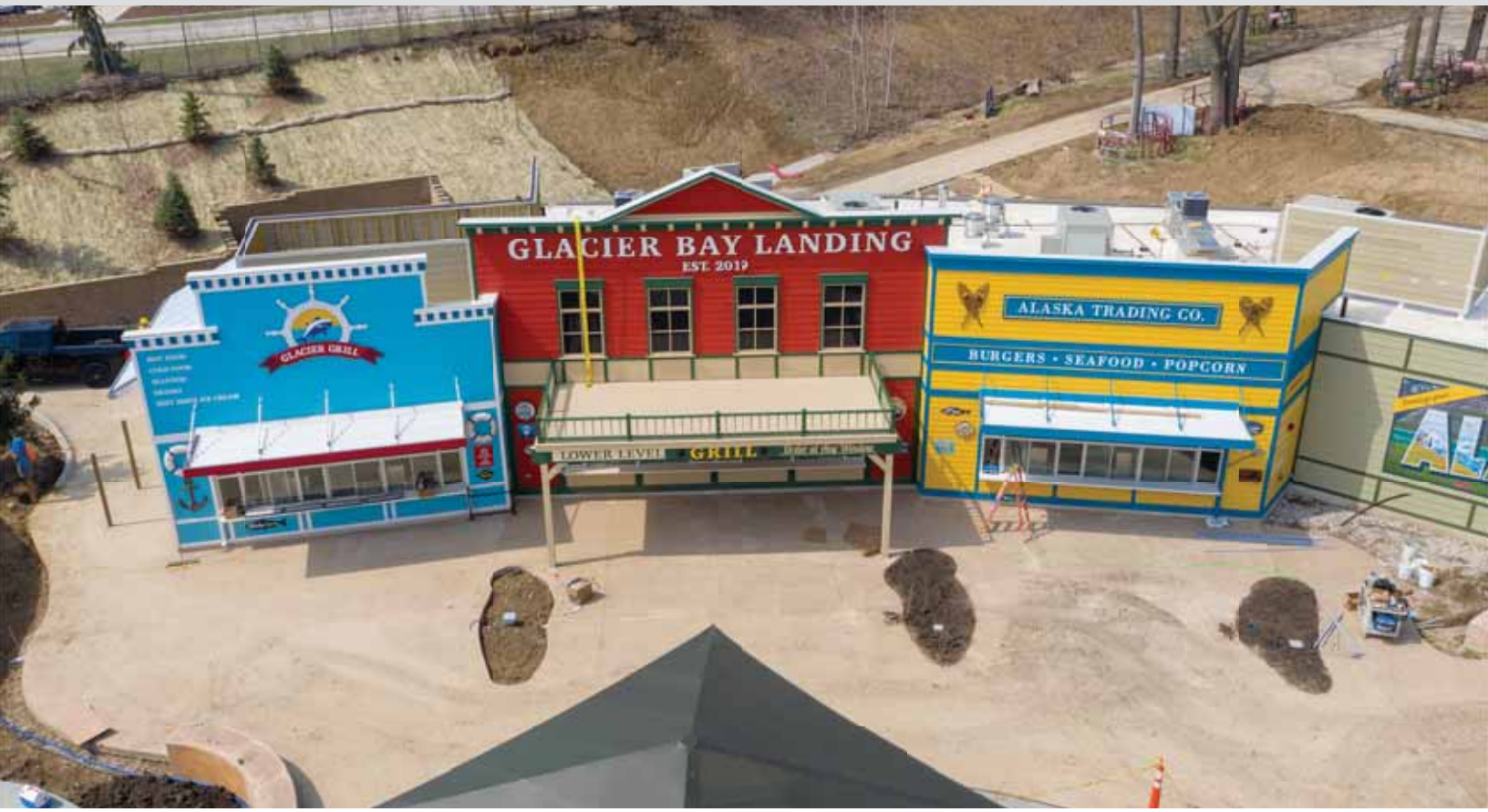
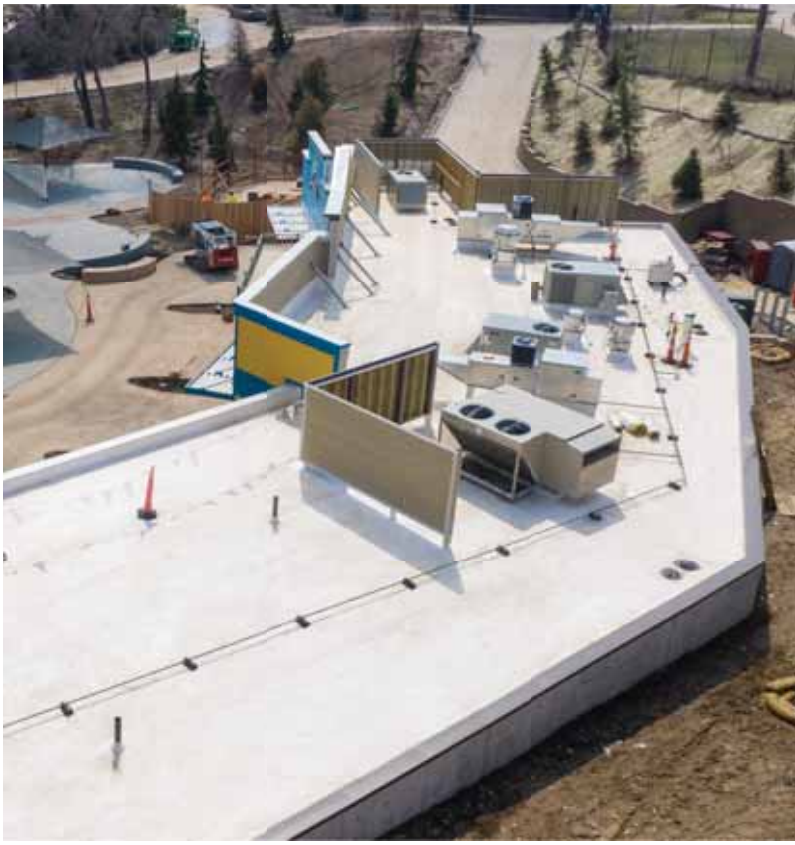


The design and construction of Glacier Bay Landing was a collaborative effort between the zoo's management team, JE Dunn Construction of Omaha, Scott Enterprises, Inc., and Omaha-based Holland Basham Architects. While this Pacific Northwest-themed recreational area comprises many unique design features, its construction, much of which took place in the winter months, presented its own set of challenges.

Because of the unique challenges inherent in cold-weather construction, particular care was taken when selecting materials for use on the rooftops of both the concession building and the sweet shop building. Rooftop applications can be challenging in cold temperatures because many roofing system products are simply unable to perform in these conditions. That is why the team at Scott Enterprises, Inc. chose to use a newly introduced, cutting-edge roofing system manufactured by Carlisle SynTec Systems: FleeceBACK RL (RapidLock) TPO.

Carlisle's RapidLock roofing system is unique in that it provides the strength of a fully adhered system without the use of bonding adhesives. This innovative system incorporates VELCRO® Brand Securable Solutions with its 115-mil FleeceBACK RL TPO membrane



> **Carlisle's RapidLock** system is incredibly easy to install and provides up to **80% labor savings when compared to a traditional fully adhered system.**

to achieve the strength and wind uplift performance of a fully adhered system while providing incredible flexibility in application, with no temperature restrictions.

In addition to the lack of temperature restrictions, utilizing an adhesive-free roofing system provides a variety of benefits, including saving significant time and cost in labor by eliminating time required for adhesive clean-up and flash-off. Carlisle's RapidLock system is incredibly easy to install and provides up to 80% labor savings when compared to a traditional fully adhered system.

Because it utilizes Carlisle's tough FleeceBACK RL TPO membrane, this system also features enhanced resistance to punctures and hail and is extremely durable for long-term performance. Additionally, with the VELCRO Brand Securable Solutions, this system offers excellent wind uplift ratings (up to FM 1-225) that are comparable to that of a traditionally adhered roofing system.

The rooftop of the Glacier Bay Landing facility incorporated two separate roofing systems—one for the flat-roofed sweet shop building, and a second for the concessions building, which featured a sloped roof. Construction for both rooftops began with the installation of metal decks, followed by installation of a two-inch layer of Carlisle's 20-psi InsulBase® polyiso insulation.

On the flat sweet shop rooftop, after the initial layer of InsulBase polyiso insulation was installed, a layer of tapered polyiso insulation with a quarter-inch-per-foot taper was installed, followed by a layer of Carlisle's two-inch-thick InsulBase RapidLock (RL) polyiso. With the highest R-value per inch of available commercial insulation products, Carlisle's InsulBase provides incredible thermal efficiency and can significantly increase the energy efficiency of a building, especially during cold temperatures.

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The concession building rooftop also featured two additional layers of polyiso insulation. The initial layer of InsulBase was followed by a layer of tapered polyiso crickets with a half-inch-per-foot taper. Like the sweet shop rooftop, the insulation was completed with a layer of Carlisle's InsulBase RL polyiso.

After all layers of insulation were in place, both rooftops were ready for the 115-mil FleeceBACK RL TPO membrane. The installation crew from Scott Enterprises, Inc. rolled out the membrane and removed the release liner, engaging the hook and loop. The utilization of white TPO on this rooftop, along with the layers of polyiso insulation, ensured optimal energy efficiency for this recreational facility. Because Carlisle's white TPO membrane is highly reflective, it is ENERGY STAR® qualified and is ideal for use in locations that experience warm temperatures.

Because of its combination of high-performing products and an innovative fastening system, this Carlisle RapidLock TPO rooftop is covered by a 20-year total system warranty with wind speed coverage of up to 90 miles per hour. Not only was this roofing system able to be installed in the cold winter months, it was installed with minimal cost and inconvenience to the owner. With optimal energy efficiency, durability, and wind uplift performance, this cutting-edge rooftop will provide long-term performance all year round, and allow the Henry Doorly Zoo to focus on keeping its millions of visitors coming back for more!

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