

A Duro-Last® CASE STUDY

Sustainable Solar Solutions

Project Details:

Maybury Material Handling; Longmeadow, Massachusetts; 37,500 square feet / Dairy Queen; Milford, Massachusetts; 15,000 square feet / Close Harbor Seafood; Plantsville, Connecticut; 10,600 square feet (combined)

Products:

EXCEPTIONAL® Metals EM PBR metal panels, 2-Piece Snap-On Compression, gutters, downspouts; Duro-Tuff® 60 mil membrane, Duro-Guard® ISO insulation, Duro-Guard® ISO HD Cover Board, custom curbs



Maybury Material Handling

Dairy Queen

Close Harbour Seafood

As adaptability has become an important topic of conversation for businesses throughout the COVID-19 pandemic, so too have the ideas of sustainability and energy conservation. While many companies scrambled to find their footing among the rapidly changing landscape, Green Earth Roofing Solutions of Ludlow, Massachusetts utilized their expertise to marry these concepts together and provide opportunities for other businesses in their surrounding communities to grow. Highlighted below are three extraordinary projects completed by the Green Earth team, which have earned them recognition by Duro-Last® for their unique sustainable solutions.

MAYBURY MATERIAL HANDLING

Located in Longmeadow, Massachusetts, this family-owned company supplies forklifts, racks, shelving, conveyors, and a variety of other products used by distributors and warehouses.

"We have multiple facilities throughout the region, and we use quite a bit of electricity in our operations for welding, forklift charging, battery charging, you name it," said

John Maybury, President of Maybury Material Handling. "We started working with Green Earth Roofing Solutions years ago to help us explore solar options to help offset some of our electrical costs. At this point, we've evolved to a place where we don't have electricity bills on the two facilities where solar panels have been installed."

As the company evaluated the future of their operations, they determined that their vehicle fleet would start to transition to electric-based, which means they would need the infrastructure to charge these vehicles throughout the day. The Maybury team devised a plan to build five oversized carports on the lot surrounding their main production facility, then install solar panels to supply power to vehicle charging stations that would be installed below.

"Maybury built the large carport structures on the property, and we supplied them with the roofing materials and solar panels," explained Todd Scyocurka, Director of Roofing Operations for Green Earth Roofing Solutions. "We worked with Duro-Last to determine exactly how the EM PBR metal panels should be

installed, identifying where each of the secondary beams were placed to ensure that the panels would overlap on them for support. The dimensions ultimately required a combination of 27-foot and 24-foot panels."

Due to the height and slope of the carports, the metal panels can be seen from the ground and the Maybury team wanted to capitalize on the opportunity to tie in their company colors to the structures. Green Earth Roofing utilized 37,500 square feet of blue PBR metal panels from EXCEPTIONAL® Metals for the roofing, as well as 750 lineal feet of white gutters and 500 lineal feet of white downspouts to safely channel water off the structures. Featuring a 563-kilowatt DC solar system as the finishing touch, the 28-foot tall structures generate 752,000 kilowatt-hours of electricity.

With a total of 10 crew members installing the roofing and solar panels, it took the Green Earth team approximately two months to complete the project.

"The electricians have finished wiring everything now, so Maybury is just waiting for the green light from the utility company to go live,"

said Todd. "They're very excited to take this first step into the next chapter of their operations, and we're excited for them. These carports are a work of art, and we wouldn't trust anyone but Duro-Last and EXCEPTIONAL Metals to supply the materials for us."

DAIRY QUEEN

Dairy Queen is known for quick meals and ice cream treats, but it takes a lot of energy to run the equipment that these meals are prepared on. The team at the Milford, Massachusetts location was determined to find a solution for their rising electricity bills and discovered that by addressing their energy consumption, they could also expand their operations.

"The owner at the Milford Dairy Queen reached out to us for assistance in evaluating solar opportunities at their restaurant," said Todd. "Because of their HVAC equipment and other rooftop units, installing solar panels on the roof wasn't an option, so we plotted out space on their lot where we could build carports. We had to place them in areas that didn't interfere with their drive-through operations, and were able to identify space on either side of their parking lot."

Utilizing EM PBR metal panels from EXCEPTIONAL Metals for the roofing portion, the Green Earth Roofing team built two 7,500 square foot carports and installed solar panels on top, helping to offset the util-

ity costs they had been battling for years. As an added benefit, the carports provided additional carry-out space for customers, which was essential during the COVID-19 pandemic. While other area restaurants struggled to adapt to rapidly-changing protocols and safety measures, the Milford Dairy Queen was able to expand its service.

"The owner actually called me at the end of the year to share that their location had achieved the highest production numbers for any Dairy Queen in the country," said Todd. "So not only did the solar carports all but eliminate their energy bills, but they also provided an opportunity to grow their revenue stream. It's remarkable."

CLOSE HARBOR SEAFOOD

Another restaurant facing challenges posed by the COVID-19 pandemic was Close Harbor Seafood in Plantsville, Connecticut. Dealing with an aging roof that was rapidly approaching the need for replacement, as well as a need for outdoor dining options to continue to serve customers safely, the owners reached out to the Green Earth Roofing Solutions team to evaluate their facility.

For the existing 6,600 square foot restaurant structure, Green Earth removed the aging material down to the metal deck and installed two layers of two-inch Duro-Guard® ISO and Duro-Guard ISO HD cover board before induction welding 60 mil Duro-Tuff® membrane over top. Custom curbs were used for rooftop units and EXCEPTIONAL Metals 2-Piece

Snap-On Compression was used to terminate the perimeter.

To address their outdoor dining need, the Green Earth team, in partnership with Maybury Material Handling, built an oversized carport that was transformed into an all-season dining solution. Utilizing EM PBR metal panels from EXCEPTIONAL Metals, Green Earth covered the carport structure and tied it into the restaurant's roofing system. Solar panels were installed on top of the restaurant and the new outdoor dining space, and wiring was run to provide electrical service to the outdoor area.

"You would never know that the outdoor space was added on to the restaurant after the fact," said Todd. "The structure itself ties in beautifully to the existing building, and they incorporated heating units, lighting, and fans for air movement, so it's almost an extension of the atmosphere inside the restaurant."

The newly installed solar panels produce 120 kilowatt-hours of clean energy for the restaurant, all but eliminating their electricity bills, and the expanded space helped their operations thrive through the unpredictable climate of COVID-19.

"According to the owners, they did 50% more business this past year than they have ever done," said Todd. "They're ecstatic about their investment and we're honored to help local businesses thrive through some of the most challenging and unpredictable years we'll ever know."



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