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For Immediate Release

Birdair Structure with PTFE and Photovoltaic Panels Provides Shade and Power for Staten Island Children’s Museum

Visitors to the Staten Island Children’s Museum in Staten Island, NY will learn about renewable energy from a new 2,200 square-foot Birdair freestanding tensile structure featuring a translucent, photovoltaic fabric roof that collects solar energy to power low-voltage lighting.

The museum’s latest addition is called the Meadow Structure and features a 3,000 square-foot tensile roof featuring Birdair’s steel cable systems and PTFE, a Teflon[®]-coated woven fiberglass membrane combined with thin-film photovoltaic panels.

Birdair fabricated and supplied the roof system that supports the photovoltaic panels and allows the individual panels to be removed without disturbing the roof fabric and also provided technical supervision during installation.

“This is a breakthrough project in the world of tensile architecture and the first tensile structure to feature thin-film photovoltaic panels and Teflon-coated fabric membrane,” says Brian Dentinger of Birdair, Inc. “The photovoltaic panels are integrated into the PTFE and provide a seamless look for the Meadow Structure.”

PTFE is capable of withstanding temperatures from minus 100 F to 500 F. It is also unaffected by UV rays, waterproof, and non-combustible. The fabric membrane is long-lasting, durable and requires minimal maintenance to retain its pristine appearance.

“With the Meadow Structure, we wanted to redefine social space and increase awareness of renewable energy by utilizing flexible photovoltaic fabric” explains Sandro Marpillero, the project architect and principal of Marpillero Pollak Architects. “We worked with Birdair to develop this new composite technology, while also configuring the design of the structure and calculating the placement of solar fabric in order to maximize southern exposure, taking full advantage of the sun for energy. The end result is a striking and unique structure set against the backdrop of the Museum’s traditional buildings from the 19th-century.”

Located on the grounds of Staten Island’s famous Snug Harbor Cultural Center, the complex once housed retired sailors and inspired the use of sun and wind due to their connection to maritime life. In addition to the use of thin film photovoltaic panels on the tensile structure, the museum also installed a rotating wind scoop and vertical-axis turbine to existing skylights over the museum building. Visitors have the opportunity to learn about how the sun and wind can be

used as renewable energy sources at an interactive museum exhibit that shows collected data from the installed technologies.

“The Meadow Structure, with its playful design and its innovative solar technology, strengthens the Children’s Museum’s identity as a place that is fun and educational at the same time. It helps the museum achieve the goal of more fully utilizing our wonderful outdoor space,” says Dina Rosenthal, executive director, Staten Island Children’s Museum.

The Meadow Structure will be used year-round as a flexible, weather-protected outdoor gathering and program space. The Staten Island Children’s Museum is New York’s only indoor-outdoor interactive museum. Since 1976, the museum has provided interactive exhibits and creative workshops for children of all ages to explore the arts, sciences and humanities.

In addition to Birdair, the project team included Marpillero Pollak Architects of New York City, Weidlinger Engineers of New York City, and Mongiove Associates as the General Contractor.

To date, Birdair has completed work on more than 1,300 tensile architecture installations worldwide. To learn more, visit www.birdair.com.

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About Birdair

Birdair, Inc. is the leading specialty contractor of custom tensile structures throughout the world. In addition to pre-construction services such as design assistance, budgeting, construction methodologies and project scheduling, Birdair provides design-build solutions in all aspects of project design, fabrication, installation and maintenance. The company offers a selection of architectural fabric membranes, including PTFE fiberglass, ETFE film, PVC and Tensotherm™, an insulated tensioned membrane system. Birdair, based in Buffalo, NY, is a member of the Taiyo Kogyo Group, with operations serving North and South America and other international locations. For more information about Birdair, [like us on Facebook](#), call 1-800-622-2246 or visit www.birdair.com.

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