

MUSEUM OF SCIENCE & INDUSTRY



CHALLENGE:

The Museum of Science & Industry has been around since the World's Columbian Exposition of 1893. Known as the Chicago World's Fair, MSI was originally built as the Palace for Fine Arts. It was renamed to Museum of Science & Industry in 1933 and now, 120 years later, the total parking lot and drop off area surface at MSI is about one and a half acres or 64,100 sq.ft. of which one acre or 43,560 sq.ft. needed resurfacing.

Several cities, like Chicago, are responding to flooding issues by mandating the addition of green infrastructure into existing projects. It became a challenge to install a permeable interlocking paver system that can handle bus traffic and heavy duty vehicular loading.

INFLUENCE:

On an annual basis, Chicago's average rainfall is about 35 inches. Statistics show that one inch of rainfall will capture approximately 27,154 gallons of water on the 43,560 sq.ft. parking lot surface.

LOCATION:

Chicago, Illinois

DESIGNER:

Stanley Consultants

Carol Yetken Landscape Architects

PRODUCTS:

Eco-Optiloc™



Eco-Priora™



Optiloc®



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In a plan using permeable pavers, if Chicago received 60 inches of snow and when melted all at once it would be equivalent to 6" of rain, and with the subgrade soil still frozen, the MSI project would have only used about 68% of the total capacity of the permeable system.

SOLUTION:

In the fall of 2013, the Museum of Science and Industry (MSI) installed a permeable paver parking lot, supplied by Unilock.

Designed by Stanley Consultants and Carol Yetken Landscape Architects, the parking lot was built as a bus drop off area for school children visiting the museum.

It features six drop off bays with [Optiloc®](#) pavers, drive aisles and employee parking with [Eco-Optiloc™](#) permeable pavers and uses [Eco-Priora™](#) permeable pavers for the pedestrian walking and crosswalk areas. The crosswalks have a slip-resistant, exposed granite face with Onyx Black [Series®](#) finish. This adds visual contrast from the field of Eco-Optiloc™ permeable pavers and helps guide the children.

A year later in 2014, Unilock observed the project site over the winter several times. In the week of February 17, 2014, MSI received about 4 to 5 inches of snow which was immediately plowed off the paver surface.

On February 18, 2014, Unilock photographed the project while the temperature was below freezing.

Two days later, the temperature increased above freezing to almost 45 degrees and received just less than one inch of rain.

The very next day the temperature once again dropped below freezing. The entire permeable paver surface remained clear and run off-free.

