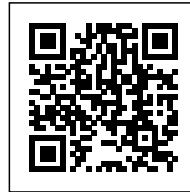




HEAD IN THE CLOUDS: RECYCLED PLASTIC BOTTLES DESIGN

Posted on March 18, 2021 by martabuges



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Head in the Clouds: Recycled Plastic Bottles Design
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Selected and built as the winning proposal resulting from a design competition organized by the American Institute of Architects New York, the Structural Engineers Association of New York and Figment, the Head in the Clouds Pavilion on New York City's Governors Island originated with the desire to create a "place to dream in the city of dreams". Made from 53,780 recycled plastic bottles – the number of bottles thrown away in New York City in one hour – it is a space that visitors can enter to contemplate the light and color filtering through the "cloud" from the inside out.



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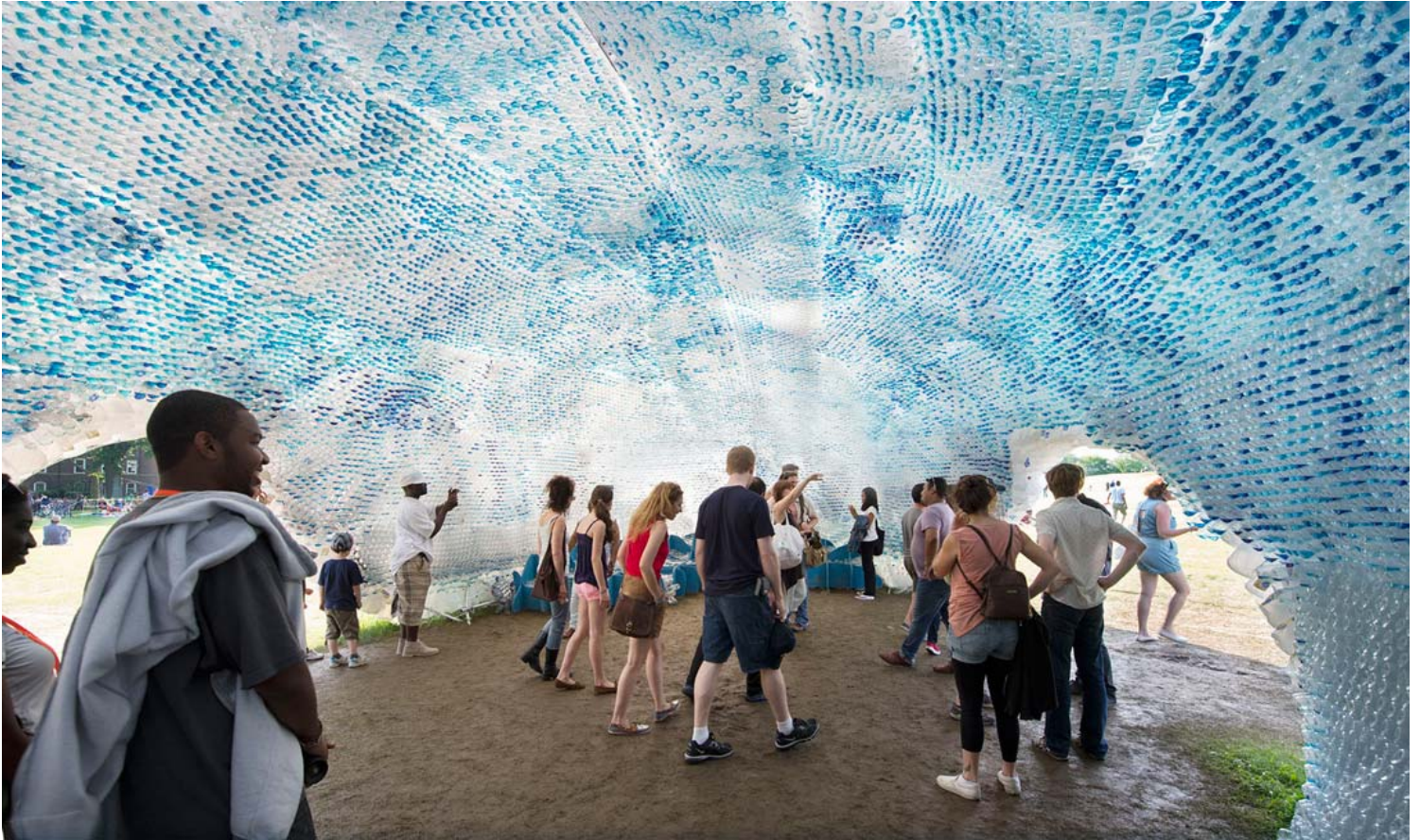
A series of "pillows" made from one-gallon jugs form the exterior, while 16- and 24-ounce water bottles line the interior. A curved aluminum diagrid frame provides structural integrity and creates a small seating and dreaming area for 50 people at the base. The water bottles were filled with varying amounts of water and organic blue food coloring to provide ballast so that no foundation was needed.

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The team collected used empty plastic bottles from organizations, businesses, schools and individuals throughout New York City and beyond, then repurposed the bottles to construct the pavilion. More than 200 volunteers from the arts and architectural community and the general public helped build and assemble the pavilion.

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BLUE INTERIOR 2



3 PILLOWS

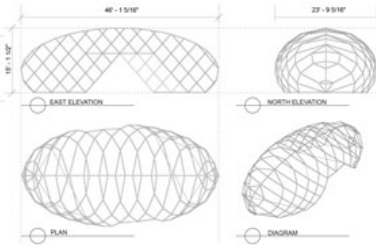
120 "pillows" are built flat, tied into their dome-like shape (4', 6', or 8' diameter), and secured next to each other on the FRAME, giving the cloud its bumpy, organic-looking shell.

These pillows are constructed from 13,780 recycled 1 Gallon Water/Milk Jugs. We have provided several local businesses with special collection bins, and they've started collecting! In addition, the New York Road Runners, and NYCRUNS have pledged to let us collect the water bottles at all of their running events until final construction.



FRAME 1

we found a structure made of 1.5" Aluminum tubes, not only weighs less and transports more easily, less material is needed, and what we do use can be recycled with less loss, therefore decreasing our Carbon Footprint.



STAGE/SEATING/BALLAST

2 platforms are created on either end of the Cloud using CNC Milled 2'x12'x10' boards. Platforms lock aluminum tubes to the correct angle and provide bracing and stability for the structure, seating, and stage areas. These platforms are layered with the mesh and water bottles (filled with sand), to provide the stage and seating areas, and complete the "Blue Interior."



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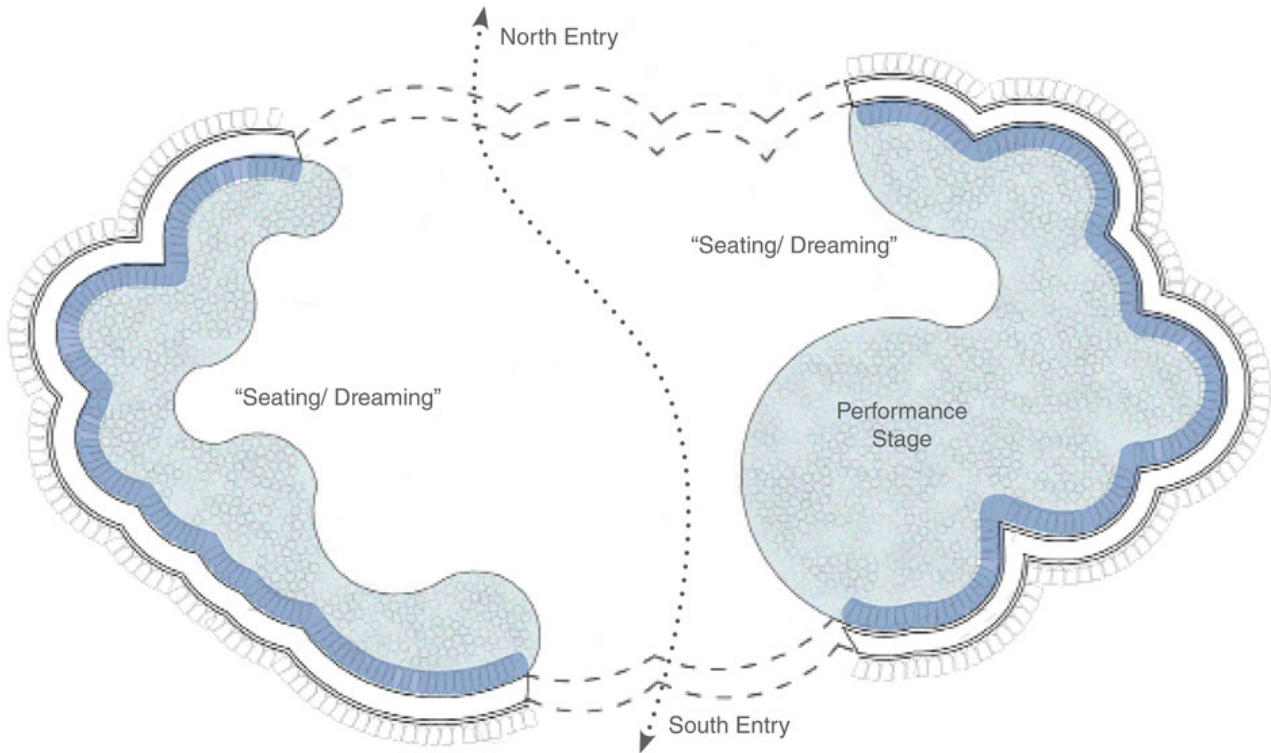


All of the building components can be easily broken down and transported, including a lightweight aluminum diagrid: a simple way to provide structural integrity without relying on heavy steel beams or larger support systems. Rather than employing high-tech fabrication techniques to turn the bottles and aluminum into cladding and structure, the design team created a simple, repetitive, cost-effective system of connections, in order to quickly and easily assemble this free, public structure.

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