# Design spotlight: Arc house in New York

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**By: Maziar Behrooz Architecture, sourced from archdaily.com**
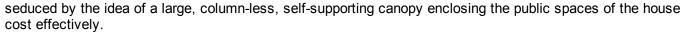**Location: East Hampton, Maziar Behrooz Architecture, New York, USA**
**Photographs: Matthew Carbone**

**The Arc House is a private residence designed for a couple and their two big dogs.**



The arc site sits under a flight path to a local airport in New York and close to a train track. Architects at Maziar Behrooz Architecture (MBA) felt that by using industrial building technology – an airplane hangar – they could transcend perceived limitations of such proximities. Furthermore, the team was seduced by the idea of a large, column-less, self-supporting canopy enclosing the public spaces of the house cost effectively.

The challenge was to find a scale for the arch that would transform this building system into an intimate and enclosed space. With a radius of 39 feet and a peak ceiling height of 16 feet, MBA designers felt the building would be small enough to feel comfortable and still have a sense of largeness associated with an uninterrupted ceiling curve.



The entry canopy to the arch and a few other components within it are at a height of seven feet, creating a touchable lower plane within the larger structure. To allow the client flexibility to add future bedrooms, the MBA team decided to house them in a flat-roofed section, in the rear, made of structural insulated panels (SIPs).

The lower level hosts an office, a sitting room, a garage and work out areas. Part of the lower level opens to a courtyard which allows cool air circulation and a distinctly private outdoor space.
By splicing the house into the landscape, MBA was able to transform the flat site into one with multiple horizons and take advantage of natural cooling and passive design.

The energy usage of the house is significantly less than a typical house of this size; due to both the arc shape and materials used. SIPs, high-thermal windows, closed-cell foam insulation and a metal roof were chiefly used while the use of conventional lumber was limited to interior framing and the exterior cedar siding only.

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