

MATTHEW TEISMANN, CHARLES VEGA

Madhouse

2015 | *Kansas City, UNITED STATES*

Rising property costs in North American cities are contributing to the desire for building on non-traditional sites. While this research recognizes that increased housing costs are inevitable, it also engages the question of buildability of particular urban locations. Are certain sites unbuildable?

Within the vibrant Westside Neighborhood near downtown Kansas City, MO, sits a narrow and steeply sloped over-grown site. The site rapidly drops ten meters from North to South. The Madhouse house project, an 1800s.f. single family dwelling, has been built both into the rock face and emerging from it - cantilevering over the cliff edge to the South. This project is named the Madhouse for a two reasons: firstly it is located on a quiet neighborhood street named Madison Street, secondly because nearly everyone who drives by comments on the 'madness' of the owner putting a house on the side of an urban cliff.

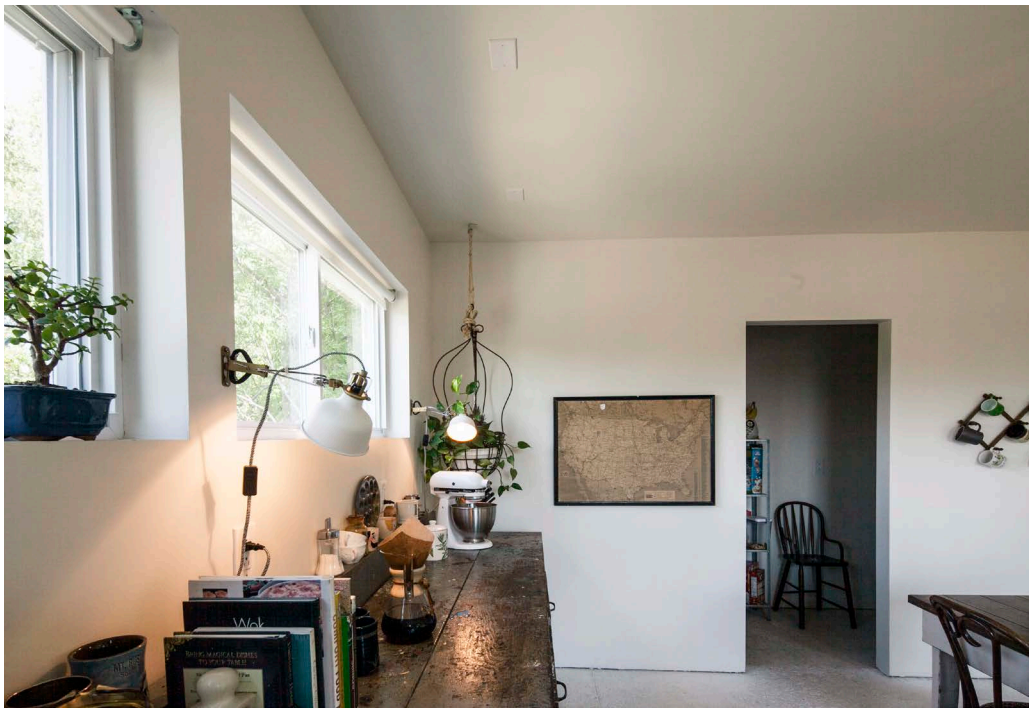
The significance of this research is that it overcomes the complex and 'unbuildable' nature of the site using a combination of construction techniques rarely employed in a single building. Though complex in construction and implementation, the simple design does not buck the eclectic style of the surrounding houses. The use of air, stone, and light have driven this design since the beginning. The solidity of the house is derived from the bedrock it is intertwined with. The natural flow of air allows this house to utilize passive heating and cooling techniques. Moreover, the duality of both being in the ground and in the trees allows for an array of lighting techniques.

MadHouse (Construction
Completed and Occupancy Permit
August 2015)









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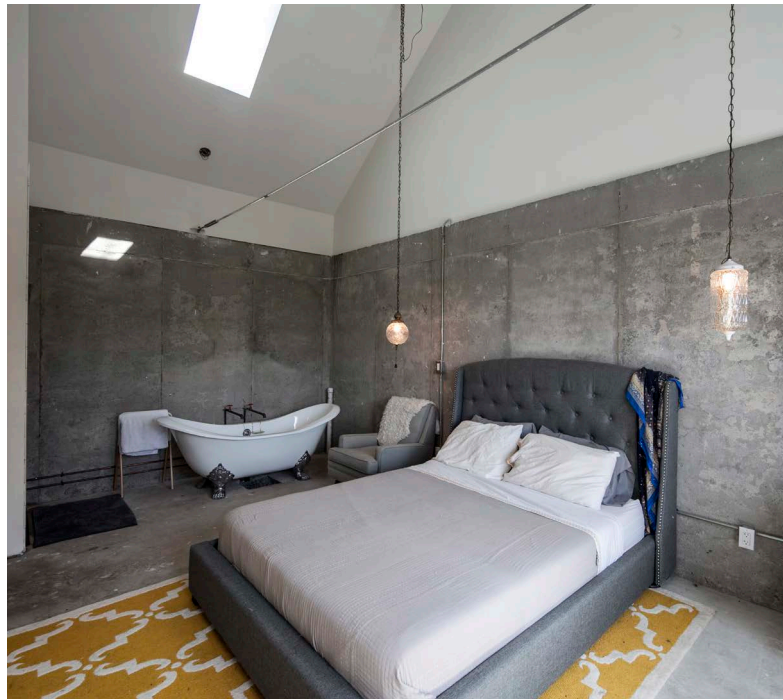




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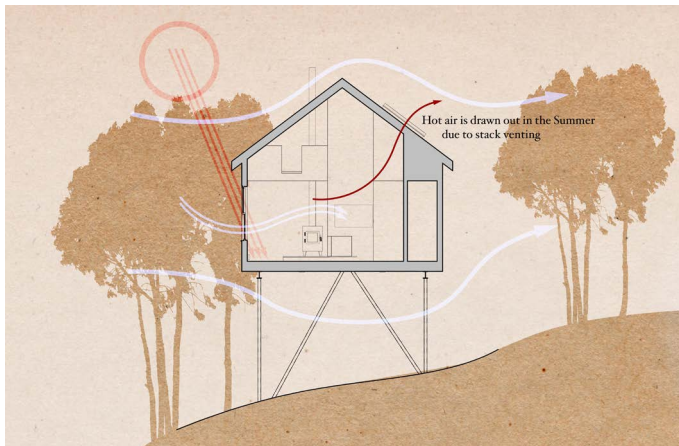
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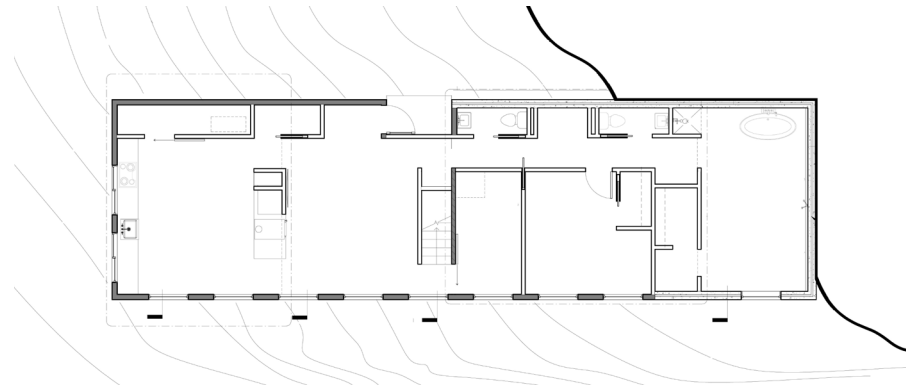
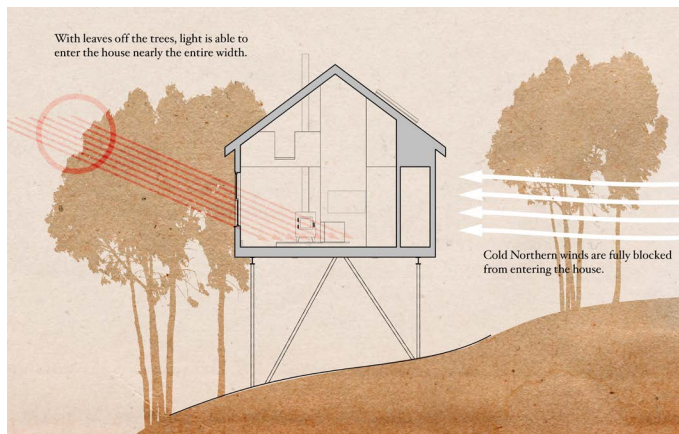
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Passive strategies in the MadHouse are actually temperature moderators. Trees shade the site during the summer months. The windows are oriented for stacked ventilation - allowing air that would typically move over the house through to suck hot air out through north-facing skylights. The plan eliminates northern glazing along the entirety of the northern wall as a utility core: restrooms, closets and storage. This provides a three foot climate-buffer eliminating harsh winter winds from entering the house. Skylights provide additional light.

The Madhouse, without forced air, has a centralized wood burning stove that heats the house during winter months using wood from the trees removed during construction. The stove is supplemented by passive systems, such as southern oriented windows (with proper shading in the summer), insulation via concrete floors & walls, partially submerged bedrooms, and R-40 walls and R-50 roof/floor.



MadHouse / LIONarchitecture

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Architects: [LIONarchitecture](#) [Office Profile](#)
Location: Kansas City, MO, USA
Area: 1400.0 ft2
Project Year: 2015
Photographs: [John liams](#) [Photographer Profile](#)



Structural Engineer: Trevor Acorn
MEP Consultant: Jerot Pearson

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