

"Thermal comfort is a human issue and should be addressed at a human scale."

THERMAL COMFORT

Our home has addressed a human level of comfort with passive ventilation, active ventilation and active heating and cooling. This also gives the user the ability to use passive means before having to use mechanical means for thermal control.

At the contest, cooling is the most dominant form of thermal control. Heating will not be needed. In Seattle, the structure's permanent home, cooling is a minor issue and heating becomes the more apparent issue. We designed the systems to cover both locations and both climatic conditions.

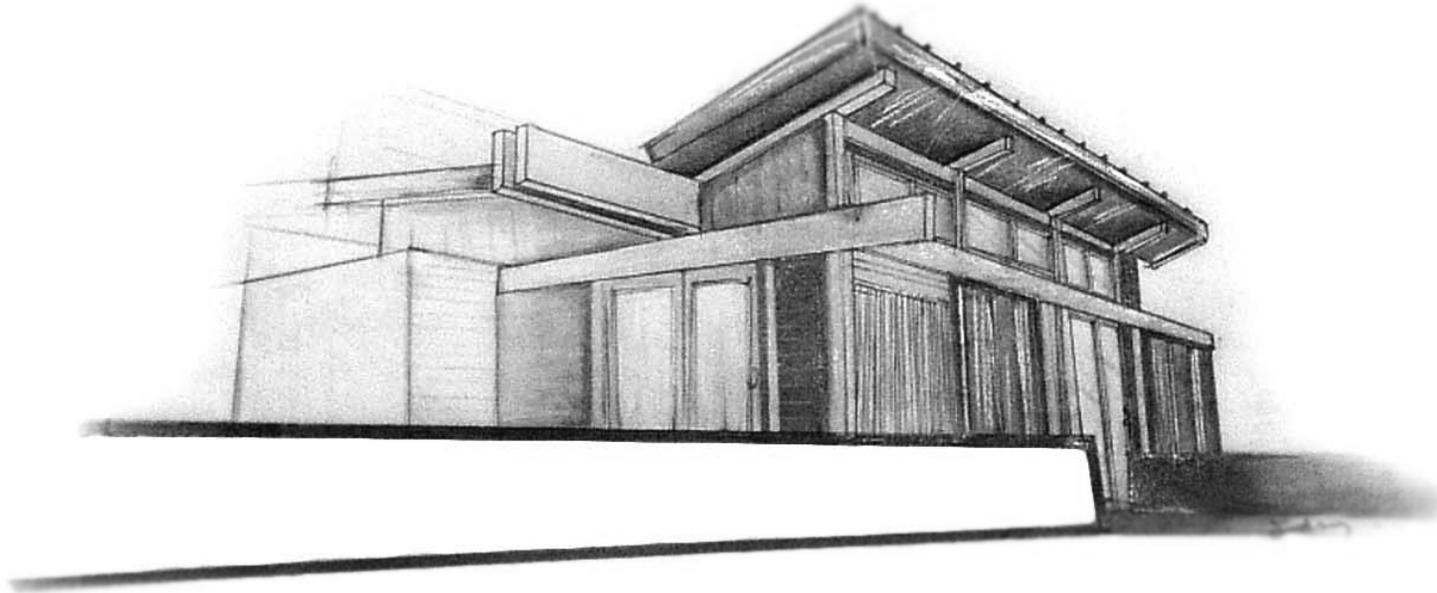
PASSIVE COOLING:

The doors, windows and clerestories are designed to open cross ventilation. The clerestory windows are equipped with awning openings to help create a stack ventilation. The stack is also encouraged by the butterfly roof, but since the space is only one story, the primary cooling is cross ventilation. When needed, the passive cooling is supported by exhaust ventilation and ceiling fan air movement.

ACTIVE COOLING:

Cooling is provided by two separate systems in a staged configuration. The primary system is comprised of two evaporator units running from a separate compressor (these compressors also operate the refrigerator and freezer). Air is forced from the top of the central mechanical core, distributed through the space, and returned from the hallway. If needed a back-up split system heat pump is used if climate conditions dictate.

WASHINGTON STATE UNIVERSITY



WSU SOLAR DECATHLON MISSION STATEMENT

Complex forms and radical gestures are not conducive with 800 square feet. Our goal was to create a simple space that is livable and homey. Solar energy should not dictate design. We strove to address the need for renewable energy, solar design and sustainable technologies, realizing progressive design can not rely on traditional design ideals.

With the program requirements, it is very easy to allow the functional aspects to generate design. We took very confrontational ideas and designed them in a non-confrontational way. Rather than overpowering the public with large moves, we present simple design. Our home is a box, but a very beautiful and functional box.

Our home is one volume interrupted by another and in the floor plan this scheme is easily understood. The public will recognize simple forms and familiar spaces, but see them in a new light. In typical modular design, it never comes down to the details. Without subtle gestures, small space design suffers. For us, details become the complex forms and radical gestures.

We are not a top five design school with unlimited cash. We are not construction workers, product designers, tour guides, web designers, or professional anything. We are students who focused on budget and human interaction to make our home a real world problem rather than a fictitious dream skewed in impracticality.

We want you to re-write the rule book for us. We are students that think, work and design differently.

