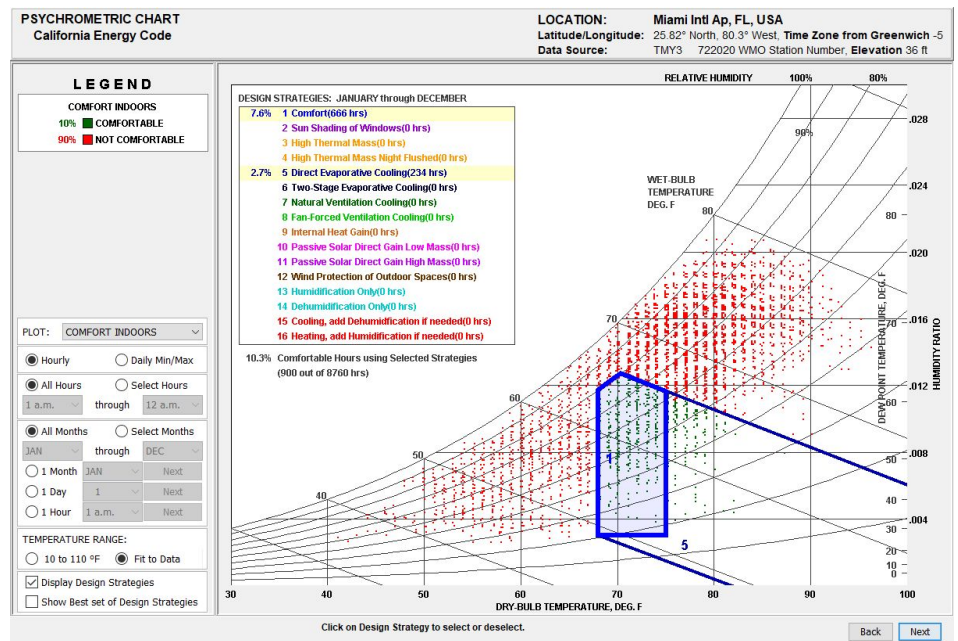


1. The Perez Art Museum by Herzog and deMeuron is located in Miami, Florida along the coast of Biscayne Bay. This is an area where the climate is tropical, hot and humid for most of the year and is also prone to Hurricanes.

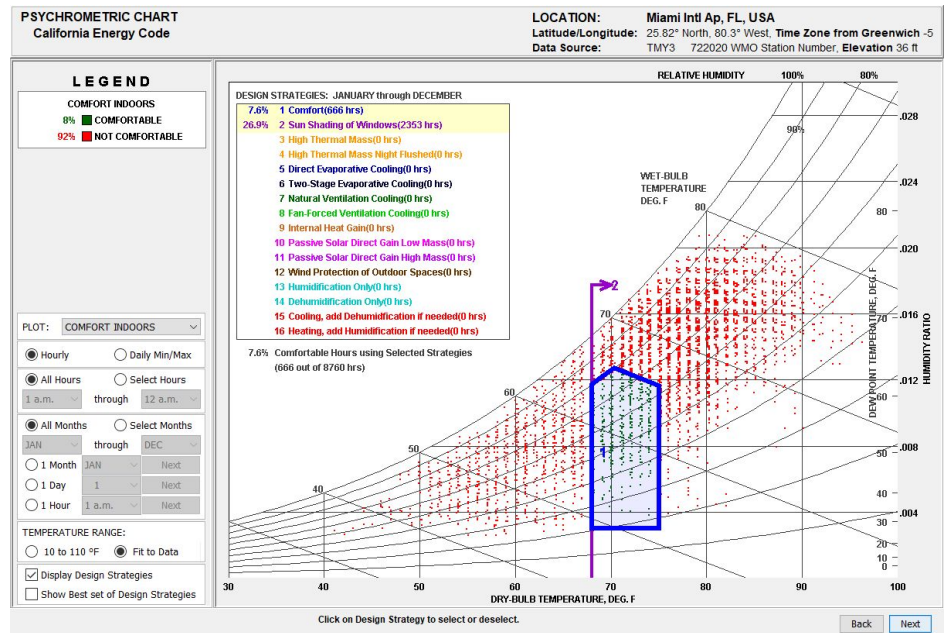


2. Design intent: The museum is “an extension of the park, offering gradual transitions from the outside to the inside, from the warm to the cool, from the humid to the dry and from the street to the art.” - Herzog and deMeuron
 - a. Strategies/features
 - i. “Due to its proximity to the water, the museum is lifted off the ground for the art to be placed above storm surge level.” - Herzog and deMeuron

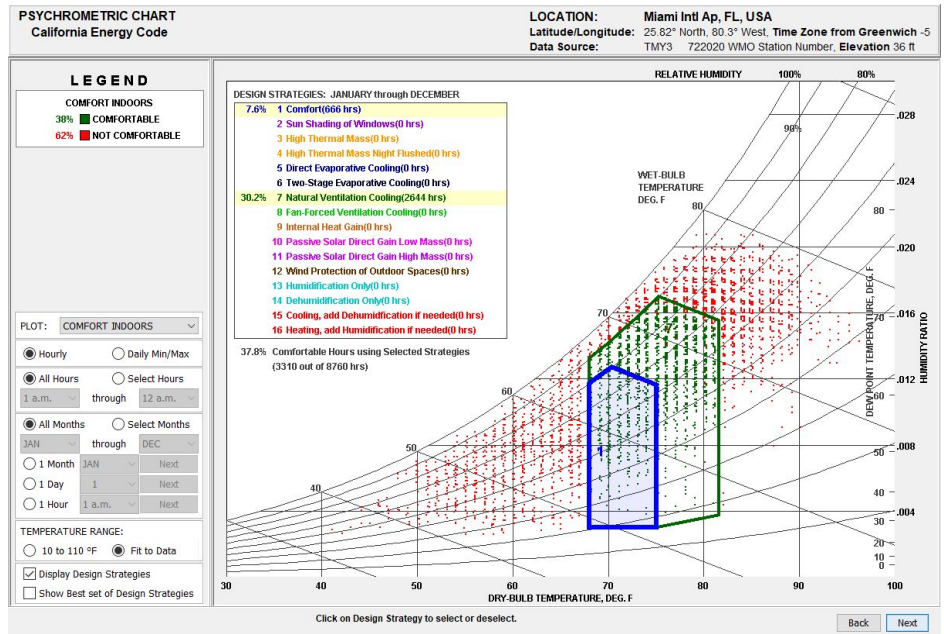


- 1.
2. Direct Evaporative Cooling from the building's proximity to water adds a 2.7% increase in comfort.

- ii. “The building’s expansive windows are recessed to minimize the sun’s impact on the glazing and to reduce the building’s energy consumption for cooling.” - Herzog and deMeuron

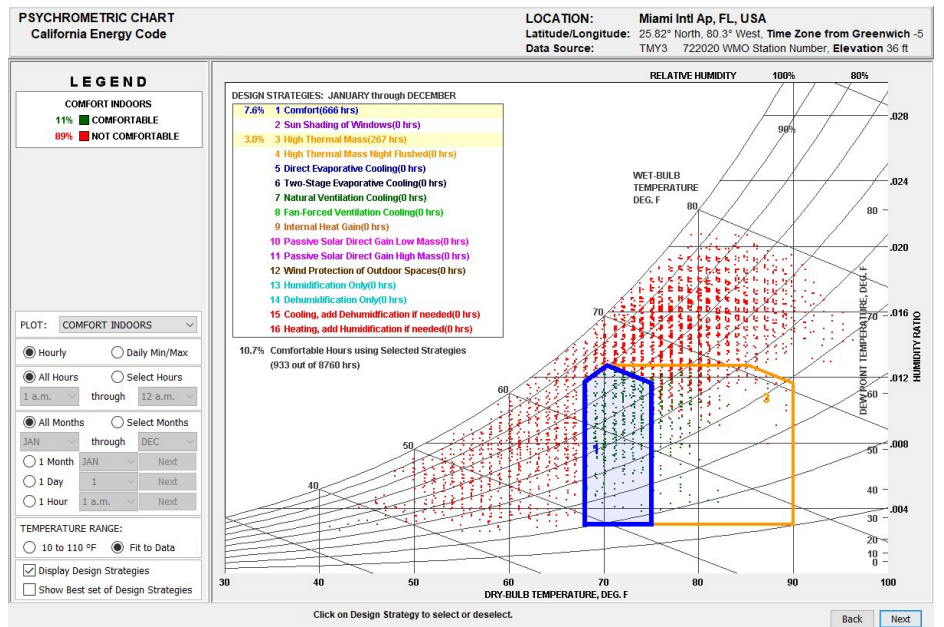


- 1.
 2. Sun Shading of Windows provides a 26.9% increase in comfort.
- iii. “A shading canopy covers the entire site to create a veranda-like space.”
“Tropical plants selected for their resilience to the local conditions engulf the structural system. Roof and plants combined will create an overall microclimate reducing the extreme temperature gaps between outside and inside in the hot weather.” - Herzog and deMeuron



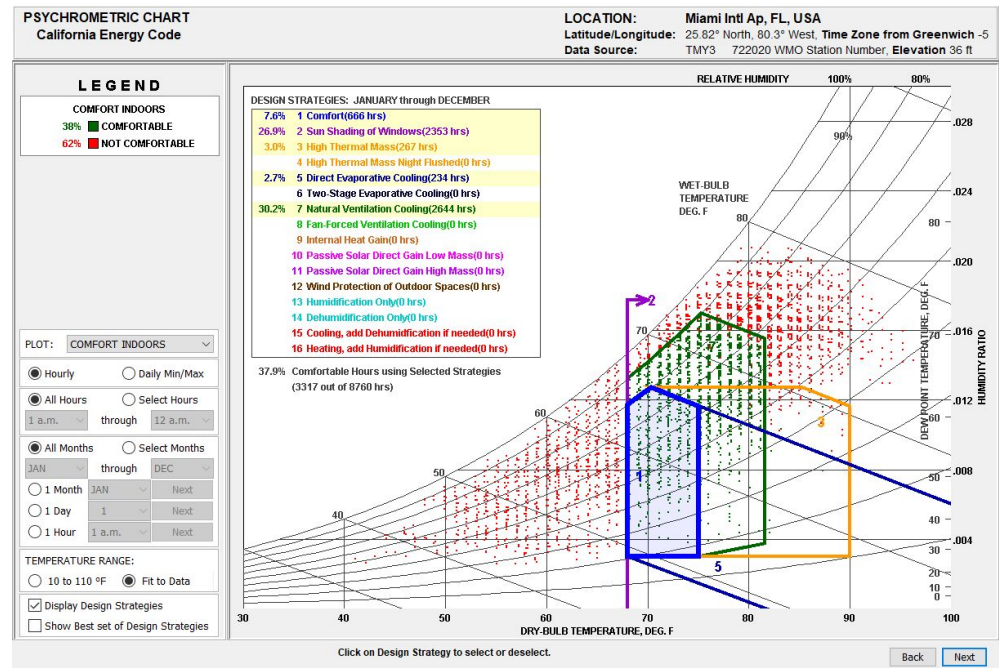
- 1.
2. Natural Ventilation Cooling is provided because of the umbrella roof and lifting the building off the ground. This could offer a 30.2% increase in comfort.

iv. The exterior surface of the museum is made of massive concrete walls.

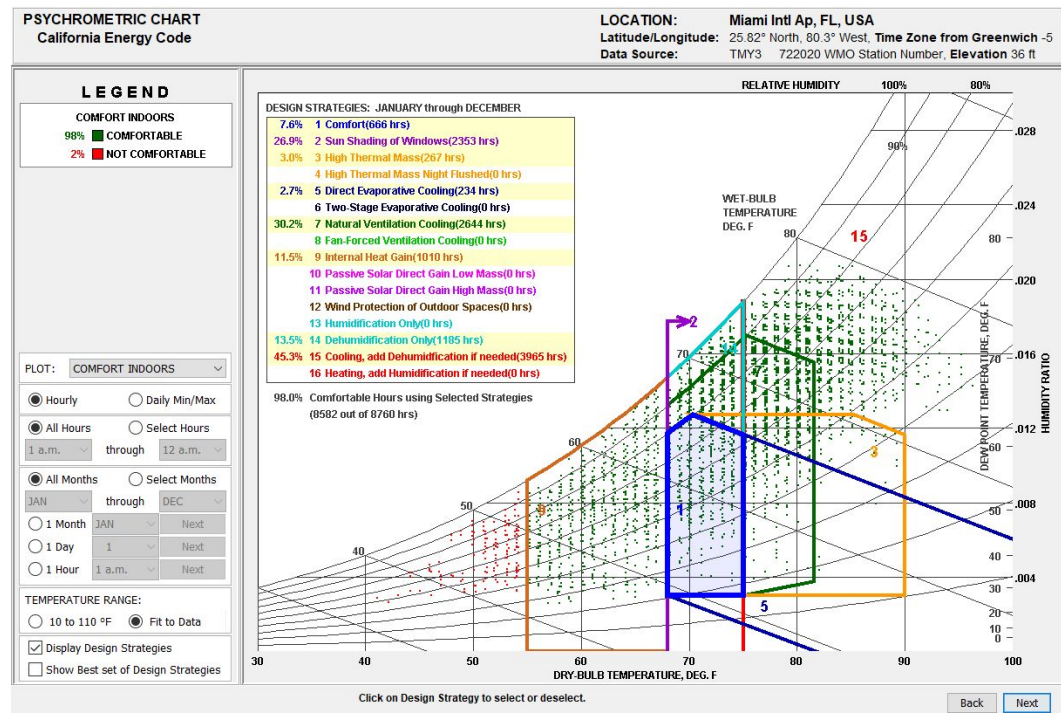


- 1.
2. The building's massive walls could yield a 3% increase in thermal comfort.

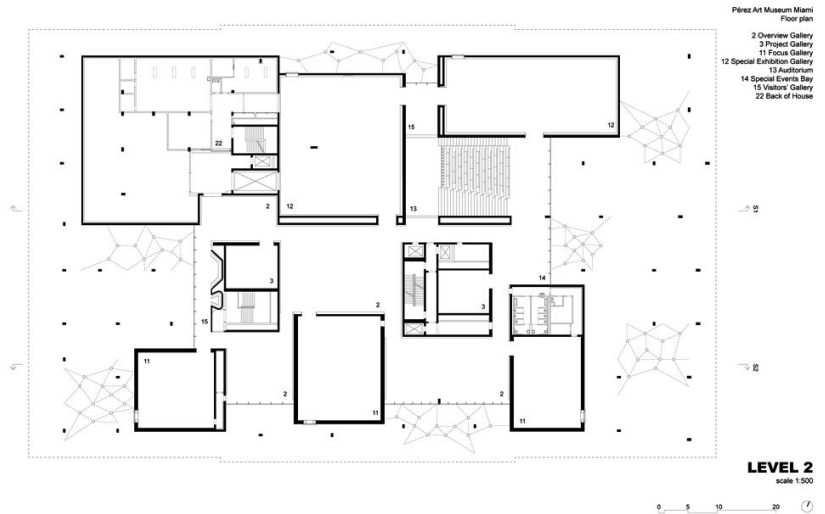
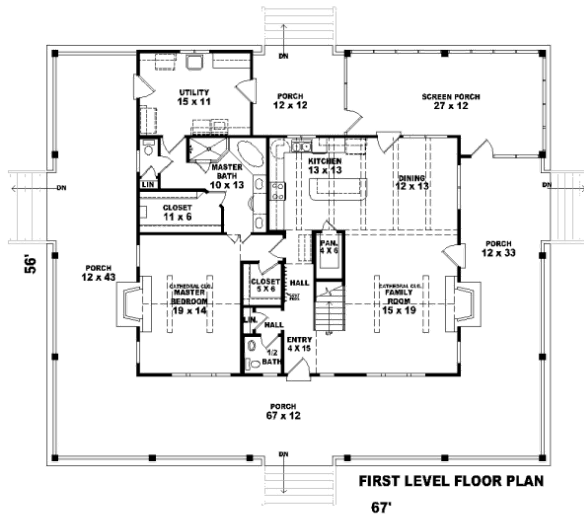
- b. Overall the passive design strategies employed could yield a 38% total comfort which is then supplemented with other cooling methods.



- c. An air conditioning system is required to provide necessary cooling and plenty of dehumidification to stabilize conditions for art display which would bring the space to acquire a level of 98% thermal comfort.



3. Critique: The designer's intent was to maximize the building's exposure to Biscayne Bay and the adjacent park by providing this open air space along the exterior of the museum space. By using strategies from the old Floridian vernacular of the Florida Cracker House the space gained a wrap-around porch-like space and is lifted from the ground for natural ventilation. (Pictured below: Traditional Florida Cracker House plan + PAMM floor plan)



When visiting the space, I noticed that most of the windows still require additional shading from temporary devices which I found to be a hinderance to the interior views of the park and the water. Perhaps in order to preserve the art displays, the museum finds that roller shades are necessary. However, the fact that the rectangular building is oriented with the largest facade facing toward the southern sun in a climate that has such harsh solar conditions is a design decision to be questioned.