



THE NEW MIAMI ART MUSEUM AT MUSEUM PARK

Green Elements

Miami Art Museum's new home is registered for Leadership in Energy (LEED) Certification, the nationally accepted benchmark for the design, construction and operation of high-performance green buildings with the U.S. Green Building Council. 'Green' elements planned for the new Miami Art Museum include:

Energy Efficiency

- The team is targeting a 20% reduction in the energy cost when compared to the baseline building (a typical art museum).
- A large exterior canopy will provide shade around the building and reduce the cooling loads on the MEP (mechanical/electrical/plumbing) system.
- An under-floor air distribution system will cool more efficiently and consume less energy. Under-floor air distribution reduces the amount of ductwork, and provides a low velocity system, with lower pressure drops, while improving indoor air quality. It also helps keep the slabs cool for a radiant cooling effect.
- Reduce electrical consumption from lighting through the use of natural light and occupancy and daylight dimming sensors in office spaces.
- Waste heat recovery chillers are used to deliver low temperature hot water reheat which is used all the time for dehumidification – given museums air humidity requirements. This heat that is created from running the chillers would otherwise be rejected and lost to the atmosphere through the cooling towers.
- AHUs (air handler units) also have face and bypass dampers to get “free” reheat.
- Upon completion, the building will be fully reviewed and will be commissioned for all HVAC systems to make sure that it runs as efficiently as it was designed.
- Reduction in energy consumption through the use of fluorescent light fixtures inside the galleries.

Water Efficiency

- Rainwater is collected and reused for the irrigation of the hanging green gardens.
- The condensate water from Air Handler Units will be collected and reused for cooling tower water makeup. A cooling tower basin sweeping system with particulate separator reduces the condenser water blowdown requirement, reducing potable water usage.
- Plumbing fixtures will consume 37% less water than traditional fixtures.

Materials

- The team has a goal of making 50% of all of the wood on the project as FSC (Forest Stewardship Council) Certified.
- For the 3rd floor exterior deck, the design team is considering the use of reclaimed wood joists that were used for the Coney Island Boardwalk in New York.

Other Green Strategies

- Non-chemical water treatment system for the MEP System (condenser water loop), so the maintenance staff is exposed to fewer chemicals, and there are fewer chemicals sent into the atmosphere through the cooling towers.
- Use of native plants to restore lost habitat that require no fertilizer, and little to no irrigation.
- Use of permeable ground cover will allow water to percolate through the site, requiring less drainage.

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