

Boano-Lowenstein Residence

Bay Harbor Islands, Florida, USA

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Photography: Robin Hill

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The design excellence of the Boano-Lowenstein residence was recognised even before its construction, with KZ Architecture receiving the AIA Florida Unbuilt Merit Award for the house in 2008 then an award for Excellence in Architecture from the Miami chapter of the AIA once it was completed. The blending of modern and sustainable design was at the heart of the project from its inception, with both architect and owners enthusiastic about making sustainability a priority for this new home situated on an infill lot in Bay Harbor. Clear sustainable design goals were established at the outset by a team of environmentally minded and LEED-accredited professionals, with the result being not only a beautiful home that respects the character of the historic community, but one which has achieved LEED for Homes Silver Certification, Florida Green Building Coalition Gold Certification and a HERS score of 72.

The house is kept naturally cool under the hot Florida sun by the heat-resistant properties of the ceramic thermal block coating and

bio-based spray-foam insulation. The high solar reflectance of the cool white roof also prevents heat penetrating the house. These features, along with 100 per cent solar-heated hot water and a 5650-litre cistern to store rainwater, have helped the house exceed the energy efficiency levels required by Florida's stringent building codes by 28 per cent, and reduced potable water usage by 45 per cent. More intrinsic sustainable elements include the use of regionally-sourced and environmentally-preferred construction materials, the use of low-VOC (Volatile Organic Compounds) or VOC-free paint throughout the house, natural light harvesting through the tubular sky lighting system, composite lumber decking, and the planting of native vegetation requiring minimal water.

The Boano-Lowenstein residence is an example of modern residential architecture respecting its local environment in an aesthetic sense and the global environment in a more profound sense.



