SPOTLIGHT
Emerging Professionals

MORELAND ARCHITECTURE AND SUSTAINABLE DESIGN, *miami, florida*

RANDALL MORELAND, AIA, LEED AP BD+C

ALL PHOTOS BY RANDALL MORELAND.

Randall Moreland's midwestern work ethic began while he was growing up in Michigan and was further honed at the University of Michigan School of Architecture where he earned a Master of Architecture degree in 2003. After working in California, he moved back to Florida and took positions with two large Miami firms while getting licensure and LEED AP certification. In 2009, he opened Moreland Architecture and Sustainable Design to "address a lack of knowledge and effort regarding sustainability in South Florida." As a licensed real estate agent and an architect, Moreland brings a unique perspective to issues relating to location, site selection, zoning and code compliance. His firm provides services ranging from property acquisition and feasibility to architectural design.

The house, which has just been awarded LEED Platinum, faces southeast while the roof with solar panels is rotated 45 degrees to face south for optimal solar orientation. The 3,400-square-foot property is projected to be net zero.

He currently serves as co-chair of the AIA Miami Chapter's Committee on the Environment (COTE). As the sustainable voice of AIA Miami, COTE works to advance design practices that integrate built and natural systems through advocacy to industry professionals, educators and the public.

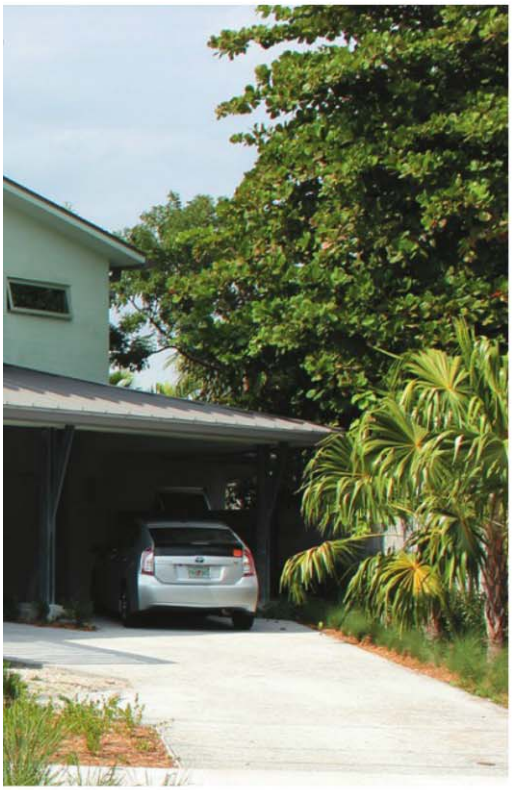
Moreland on Trapp

"It gives me pleasure that my oldest daughter has recently begun turning off lights and water faucets and sorting and recycling empty containers.

While designing our family home in Miami, known locally as Moreland on Trapp, I addressed many sustainable issues and a part of my mission was to encourage positive energy use habits in the people living here."

The Energy Loop

The Moreland house provides constant positive feedback through what the



Sustainable elements include a 1000-gallon rainwater collection bank, two solar-thermal panels for hot water, a solar-thermal pool heating system and insulated concrete forms, minus the foam insulation on the outside to minimize cracking during a potential hurricane.

The Florida vernacular-style house was designed to create a natural air-conditioning effect through the use of operable windows and vaulted ceilings with high-volume, low speed fans.

architect refers to as an "energy loop." The initial design input for the house came from existing site conditions. Cues were taken from the macro and microclimates, solar orientation, prevailing winds and topography. Along with site conditions, the inhabitants' need for shelter, comfort and utility became part of the "energy loop" through rigorous programming.

If a building is designed correctly, these conceptual elements meld seamlessly. Feedback continues as activity informs space, space informs users, users inform activity and so on in a continuous loop.

While the architect's role eventually comes to an end, the feedback loop, formally and informally, continues through the life of the structure. It is constantly shaping, guiding, accepting and reflecting in response to the users. This is why the most successfully sustainable buildings constantly adapt and adopt by accommodating and influencing new users and new activities. Quality design, while not anticipating the exact adaptation, will anticipate future flexibility requirements. Design is the anticipation of experience! ■