



 **ICYNENE**

2020 Alton Road

Miami Beach, Florida, USA



Located near the heart of Miami Beach, the 2020 Alton Road development is believed to be the first home in Southern Florida to strive for a LEED Platinum status. Including an array of green, sustainable and modern features, the development is destined to be a shining example of green living in the Sunshine State.

Set on a 58 x 120 foot lot in Miami Beach, the 2020 Alton Road development brings together the very best of sustainable design and living to Southern Florida. Close to Miami Beach's famous Collins Avenue and its popular restaurants, hotels, galleries and boutiques, the 3,200 sq. ft. 2020 Alton Road development is on track to pursue a LEED Platinum rating as well as achieving net zero status. It is

believed to be the first home in Southern Florida trying to achieve a LEED Platinum accreditation.

### **The Vision/The Challenge**

A joint effort between a Florida-based architect, developer and general contractor, the 2020 Alton Road development aims to showcase the possibility of truly sustainable living in the region.

Setbacks imposed upon the development by the city meant that the design team had to rethink their original concept. The city indicated that the buildable area was not to exceed 32 feet in width nor in height. These restrictions meant that the home could be no greater than 3,200 sq. ft. in size. The design team sought to take advantage of the limitations imposed on them by the city by refining their design to create a visually appealing and environmentally conscious home.

### **The Solution**

2020 Alton Road is jam packed with green, environmentally-sustainable features which help work towards achieving net-zero status. The design team approached a number of leading manufacturers, including Icynene, to become involved in the home to help them work towards a LEED Platinum accreditation.

The 2020 Alton Road development used Icynene spray foam insulation to help control thermal comfort as

well as air leakage. A local licensed Icynene contractor sprayed both open and closed cell spray foam insulation including Icynene's environmentally-friendly Icynene Classic Eco.

Icynene Classic Eco is made in part with castor oil which offers homeowners a range of environmental and health-related advantages. Replacing a portion of the polyol in Classic Eco with castor oil reduces the need for petroleum-based polyol. Icynene Classic Eco works to help improve indoor air quality, is 100% water blown and is HFC and PBDE free. Icynene closed-cell spray foam insulation was also used throughout the property. Closed-cell spray foam insulation can provide buildings with structural strength and can reject bulk water, ideal in Florida where hurricanes and extreme weather events occur regularly throughout the year.

The 2020 Alton Road development also features a 7000 gallon rainwater storage system which captures rainwater to fill the pool as well as provide irrigation. A geothermal heat pump system was included to provide ample heating and cooling to the property as well as produce the majority of the home's hot water.

Two 600kW wind turbines together with an 11.5kW solar photovoltaic system contribute to the development's sustainable design. Additional features included into the 2020 Alton Road development included mold resistant

drywall, flyash concrete as well as low or no VOC paints.

### **The Result**

The wind turbines together with the solar panels and the Icynene open and closed cell spray foams will work in harmony to help create a net zero home. As a net zero home, 2020 Alton Road will be able to produce enough energy to power the entire home. Furthermore, the amount of excess energy being generated by the home can potentially be sold back to the local utility company.

The range of environmentally sustainable and green products and tools used throughout the 2020 Alton Road development ensure that the home is on track to achieving its net zero status and its LEED Platinum accreditation.

2020 Alton Road is a premier example of how net zero living and thinking green can be a reality in Florida where the heat, humidity and extreme weather events can impact the quality of living for homeowners. 2020 Alton Road shows that green living is possible.

#### *Sources/Footnotes:*

1. 2020 Alton Rd website - <http://www.2020alton.com>
2. 2020 Alton Rd Facebook page - <http://www.facebook.com/2020Alton>
3. 2020 Alton Pinterest page - <http://pinterest.com/greenesthomeusa>
4. Icynene Inc. would like to thank Matt Lahn for his assistance with this document.

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