

NGBS GREEN CASE STUDY

Bayamón, Puerto Rico



**NGBS
GREEN™**
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About the Project

Project Type: Single-family new construction

Unit Size: 913 sq. ft.

Location: Bayamón, Puerto Rico

Performance: NGBS Green Certification – Bronze Level (Sept. 2020)

Website: slsco.com/pr-r3-cdbg

Project Team:

Developer: [SLSCo Ltd](#)

Verifier: [Annette Fernandez](#),
AVA Environmental Consultants

Architect: [SCF Arquitectos](#)



Overview

This 913 square foot, two-bedroom, one-bathroom home was constructed on the previous foundation of a home destroyed in Hurricane Maria.

The design is the first of many homes planned to be constructed using this prototype across the island. Like many communities, Puerto Rico is experiencing an increase in intensity and frequency of large-scale storm events, as well as earthquakes. As an island community, Puerto Rico is even more vulnerable to the impacts of climate change and a sustainable future requires that all resources are used as efficiently as possible.

This construction type can help Puerto Rico attain a more sustainable future by conserving energy and water, by improving on the resilience of the structures, and by making it easy to become deeper green with provisions for future cisterns, renewables, and a generator.

Why is an NGBS Green Certified home a better place to call home?

“SLSCo Ltd is proud to have completed the first NGBS 2015 Green Building Certification in Puerto Rico, as part of this extremely important R3 CDBG-DR program of housing reconstruction, much needed for the victims Hurricanes Irma and Maria. The NGBS 2015 standards integrated forward thinking features such as resiliency, energy efficiency and home owner training on green living practices. These sustainable features will greatly benefit the residents of Puerto Rico, historically vulnerable to hurricanes, high cost of electricity and informal housing construction.”

– Vincent Fafard, P.E., Puerto Rico CDBG Program, SLSCo Ltd.

The Verifier Voice

“For us at AVA Environmental Consultants, it has been a great honor to be part of the team responsible for the certification of the first house in Puerto Rico under the ICC/ASHRAE 700-2015 National Green Building Standard. It is always satisfying to work with a team seeking to integrate green building practices into their construction methods. Thanks to SLS for entrusting us as their verifiers and to the support team at NGBS.”

– Annette Fernandez, NGBS Green Verifier, AVA Environmental Consultants

NGBS Green Features/Practices

Chapter 5: Lot Design, Preparation, and Development

- Construction within pre-existing building footprint
- Reuse of driveway and parking area to avoid additional disturbance to existing slope
- New carport built with permeable grass pavers
- Stormwater best management practices installed during construction

Chapter 6: Resource Efficiency and Durability

- Aluminum storm-rated windows
- Universal design elements such as no step entrance, lever door handles, single control faucet controls
- Regional materials used for major and minor building components
- Construction waste recycled

Chapter 7: Energy Efficiency

- ENERGY STAR certified kitchen appliances
- ENERGY STAR certified LED lighting
- ENERGY STAR certified solar water heater
- ENERGY STAR certified ceiling fans in living room and bedrooms
- Rough-in for future energy solar panels and stand-by power generator

Chapter 8: Water Efficiency

- Water Sense certified low-flow fixtures, toilets, and showerheads
- Rough-in for future water cistern

Chapter 9: Indoor Environmental Quality

- Low VOC kitchen cabinets
- Low VOC paints, adhesives, and sealants
- Spot ventilation in bathrooms
- Clothes dryers vented to outdoors

Chapter 10: Operation, Maintenance, and Building Owner Education

- Maintenance checklist to maintain home's high-performance features
- Home manual includes information on public transportation options, local recycling programs, available renewable energy programs, and future cistern provisions

Other Green, Durability Features

- Concrete roof is designed with a greater than typical slope to prevent water ponding and subsequent damage to the structure
- Design allows for a future water filtration system
- Includes a waterproofing system with 10 year warranty

