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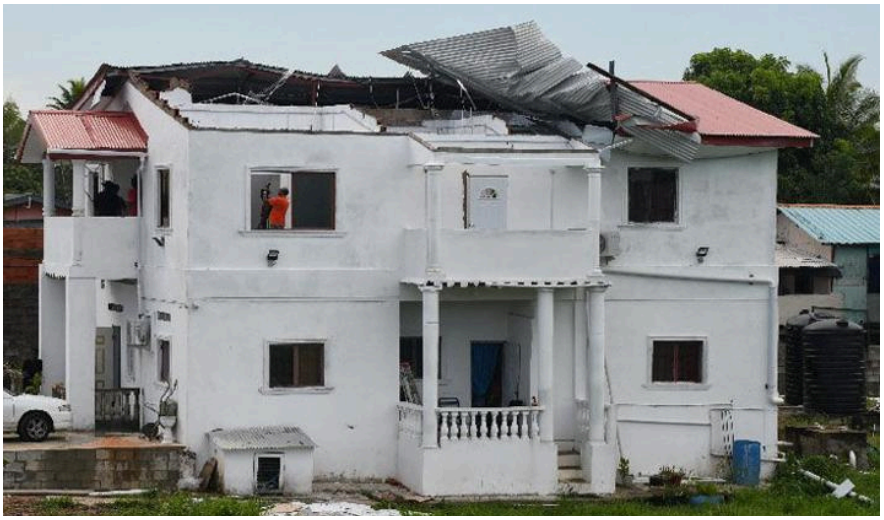
NEWSLETTER

CONSULTING ENGINEERS ASSOCIATES 2005 LTD.

The Crisis of Wind-Resistant Roof Construction in the Caribbean



Across the Caribbean , roof failures have become an all-too-familiar sight after periods of strong wind. What makes this especially concerning is that many of these failures occur during moderate wind events, conditions well below hurricane strength.

Entire roof systems are often lifted off homes, rafters and all, leaving families exposed to the elements and facing significant financial loss. These incidents are not isolated, and they are not unavoidable. In many cases, they are the result of preventable construction shortcomings.

Why Roofs Are Failing

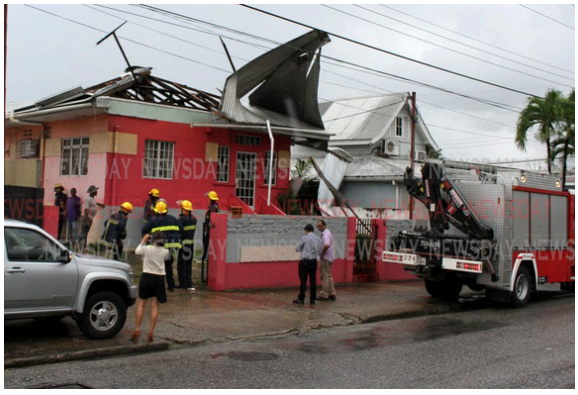
When a roof is lost, it is rarely just the sheeting. Frequently, the entire structure separates from the building below. This points to a critical weakness: poor or missing anchorage between the roof framing and the supporting walls or reinforced concrete ring beam.

Proper roof anchorage is essential. Without it, wind uplift forces can overwhelm a structure, even in relatively common weather events. A well-designed and properly secured roof may lose a few sheets under extreme conditions, but it should not fail entirely. The difference between minor repairs and total roof loss can amount to tens of thousands of dollars, often beyond the reach of many households.

A Cycle We Keep Repeating

After major wind events, the same scenes play out across affected communities: damaged homes, displaced families, and hurried repairs. Unfortunately, in the rush to rebuild, the same construction errors are often repeated. Roofs are replaced without proper detailing, supervision, or adherence to established standards.

As climate change brings more frequent and unpredictable wind events, this cycle of damage and rebuilding places increases strain on homeowners and communities alike.



The Hidden Risk in Informal Construction

A significant portion of residential construction occurs within the informal sector. Many homes are built or extended by small contractors or homeowners themselves, often without formal engineering input.

While experience is valuable, it cannot replace sound structural principles. Common practices such as relying solely on nails, omitting hurricane straps, or fixing roof frames to unreinforced blockwork—leave homes vulnerable. These roofs may appear sturdy, but their weaknesses are exposed when high winds occur

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Moving Toward Safer Homes

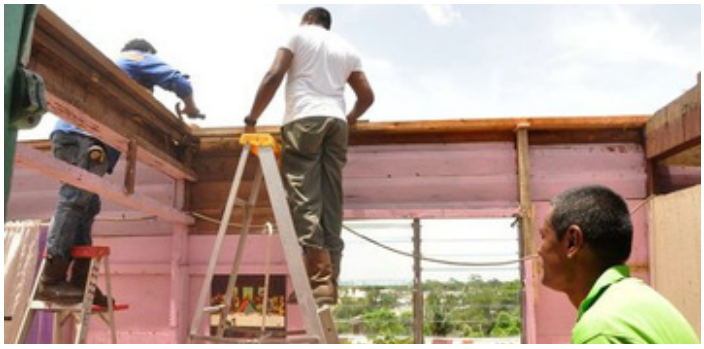
Improving wind-resistant roof construction requires a coordinated approach:

- Education: Builders, tradesmen, and homeowners need clear, practical guidance on proper roof anchorage and detailing. Simple, illustrated resources can make a significant difference.
- Outreach: Information must reach people where construction decisions are made through hardware stores, regional offices, community centers, and digital platforms.
- Oversight: Minimum standards for roof construction and anchorage should be consistently required for residential development.
- Training: Basic certification and skills training for small contractors can raise overall construction quality and resilience

Standards Exist—But Aren't Reaching the Ground

Guidance for safe residential construction already exists in many jurisdictions . The challenge lies not in the absence of standards, but in limited awareness and enforcement. In many communities, compliance remains voluntary, and unsafe practices continue simply because "that's how it's always been done.

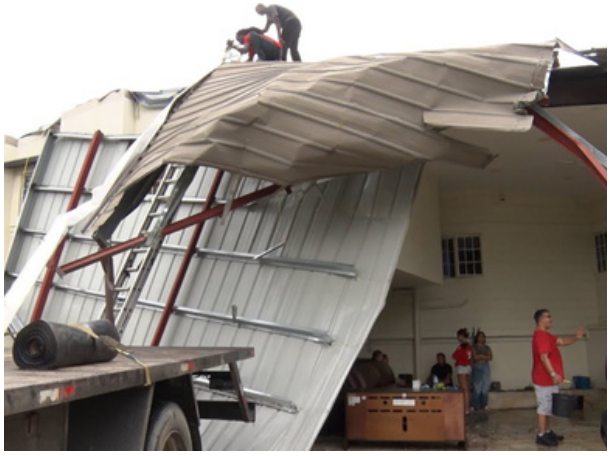
Bridging this gap between knowledge and practice is essential if meaningful progress is to be made.



Building Resilience Before the Storm

When roofs fail, the impact goes far beyond physical damage. Families lose security, stability, and peace of mind. Preventing these losses begins long before a storm arrives with better construction practices and informed decision-making.

Wind-resistant roofs are not a luxury; they are a necessity. By strengthening how we build today, Trinidad and Tobago can reduce future losses, protect communities, and move toward a more resilient built environment.



What this Means for You

Wind-resistant roof construction affects everyone.

- Homeowners: Proper roof anchorage protects your home and reduces repair costs after storms.
- Builders: Safe construction means more than materials, it requires correct detailing and anchorage.
- Developers: Ensuring minimum standards are met protects both investments and occupants.

A well-anchored roof can be the difference between minor damage and total loss.

CEAL'S Call to Action

At Consulting Engineers Associates 2005 Ltd. (CEAL), we support safer, more resilient construction.

We encourage stakeholders to:

- Use sound engineering guidance
- Follow approved standards and best practices
- Build with long-term safety and durability in mind

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