This standard provides guidance and best practices for the design and construction of buildings that can withstand high winds.

Wind resistant house to-do list:

- ✓ fasteners
- ✓ garage doors
- ✓ cladding
- ✓ envelope components

The standard recommends building components that are high-wind resistant.

THE POWER OF STANDARDS: BETTER DESIGN AND CONSTRUCTION

The CSA Technical Committee on High Wind Safety for Low-Rise Residential and Small Buildings developed the standard.

Standards in (Climate) Action: The blueprint for resilient and sustainable communities

CSA S520:22 – Design and construction of low-rise residential and small buildings to resist high winds

The challenge: High wind events in Canada

Climate change is increasing the frequency of severe weather events in Canada. It too often reveals the vulnerability of our built environments to these types of stressors. High wind events, including tornadoes, can cause significant structural damage to house roofs. The impact of house roof damage or failure can be catastrophic. It can:

- lead to a total loss of the building and its contents
- risk the lives and health of the building's residents

Homeowners, insurers and other decision-makers are increasingly looking for methods to incorporate into new home construction and renovations to reduce this risk.

About the standard

This standard supports:

- people involved in the building and housing industry
- manufacturers wanting to prepare their products for high-wind resistance
- homeowners seeking to improve their homes
- property and casualty insurers or government agencies wishing to incentivize or apply high-wind reduction for residential buildings

The guidance in this standard is based on (and written to supplement) the requirements specified in Part 9 of the National Building Code of Canada.

Impact: Envisioning a wind-resilient home

This standard contains best practice guidance for the design and construction of low-rise woodframe buildings to withstand high winds corresponding to EF-2 tornado-level wind speeds of 113 to 157 mph (181 to 253 km/h). This standard can be followed for:

- all new construction
- major additions or alterations to existing structures

What does a wind-resilient house roof look like? The standard focuses on two main areas:

- **It provides guidance** on the use of fasteners to help connect the floor, walls and roof in ways that distribute the force of the wind through all the main structural components of a house. It reduces the potential for damage and all-out failure.
- **It specifies material and design** considerations that can reduce the potential for wind damage to other wind-sensitive components of most houses. Examples of components include garage doors, house cladding and other components of the building envelope.

Next steps

Severe wind is a significant driver of disaster losses in Canada. The Ontario Building Code is currently considering how to refer to this standard. Professional associations are providing training on:

- how to use the standard
- what it covers
- why it's a valuable tool to make homes in Canada more resilient to the impacts of climate change

SCC CCN