

RETROFIT Improvements

Impact Resistant Door

Making
Homes
Safer in
Disasters

Retrofit Opportunity

- When existing doors are replaced

Purpose

- To protect door openings from debris impact during a storm event
- To prevent wind-driven moisture from entering into the home

Benefits

- Reduces the potential of windborne debris breaching a door opening
- Reduces the potential of wind-driven moisture entering into the home and soaking its interior

Hazards

Wind



Rain



Flood



Seismic



Fire



Snow



Summary

During a storm, unprotected doors can fail easily under wind pressure and from windblown debris. When an excessive amount of wind enters into a home, the interior wind pressure rises significantly. As the wind pressure increases, major structural damage is likely to occur—such as the roof detaching from the structure—leaving the home defenseless against violent and severe weather. One method of protecting doors from damage during a storm event is by replacing existing doors with impact resistant doors.

Impact rated doors cost between \$50 and \$150 more than doors with comparable aesthetic features. When selecting an impact rated door, ensure that it adheres to one of the following building code standards:

- ASTM E 1886 & E-1996 or
- TAS 201, 202 and 203.

Illustration

Retrofit



Potential Damage



Photo: www.fema.gov

Key Steps

- Select a door that is impact rated.
- Follow manufacturer's instructions when installing door.
- Consider installing a door which swings outwardly to provide additional resistance to high winds.
- Your contractor may have additional ideas on how to improve the safety of your home.
- For more details about this retrofit improvement, please refer to the list of Resources in the section below.

Resources

Federal Alliance for Safe Homes, *Hurricanes: Doors and Windows – Emergency Board Up*
http://www.flash.org/peril_inside.php?id=104

FEMA, *Protect Windows and Doors with Covers*
<http://www.fema.gov/library/viewRecord.do?id=3263>

Florida Division of Emergency Management, *Openings (Windows and Doors)*
http://www.floridadisaster.org/hrg/content/openings/openings_index.asp

Insurance Institute for Business & Safety, *Fortified for Existing Homes,™: Engineering Guide*,
http://www.disastersafety.org/content/data/file/IBHS_FOR-engineering-guide.pdf

My Safe Florida Home.com, *Wind Certification Entity Inspector Training Program Resource Manual*
http://www.mysafefloridahome.com/images/WCE_resource_manual_edits022108indd.pdf

