



Residential Safe Rooms

Every year, tornadoes, hurricanes, and other extreme windstorms injure and kill people, and cause millions of dollars worth of property damage in the United States. Most homes, even new ones constructed according to current building codes, do not provide adequate protection for occupants seeking refuge from these events.

Having a Safe Room built for your home can help provide “near-absolute protection” for you and your family.

What is a Safe Room?

A Safe Room is a room or structure specifically designed and constructed to resist wind pressures and wind-borne debris impacts during an extreme-wind event, like tornadoes and hurricanes, for the purpose of providing life-safety protection.

A tornado or hurricane can cause much greater wind and wind-borne debris loads on your house than those on which building code requirements are based. Only specially designed and constructed Safe Rooms, which are voluntarily built above the minimum code requirements, can protect you from these risks.

Does Your Family Need a Safe Room?

To help you with this decision FEMA has created a Homeowner’s Worksheet for assessing risk for extreme-wind events in [FEMA 320, *Taking Shelter from the Storm: Building a Safe Room For Your Home or Small Business* \(2008\)](#). This publication helps individuals determine their need for a safe room and how to work with their builder/contractor to plan and build one.

Types of Residential Safe Rooms

There are two general types of residential Safe Rooms: in-residence Safe Rooms and stand-alone Safe Rooms (located adjacent to, or near a residence). An *in-*

residence safe room is a specially designed “hardened” room, such as a bathroom or closet that is intended to provide a protected area for the people who live in the house.

A *stand-alone safe room* is similar in function and design, but it is a separate structure installed outside the house, either above or below the ground surface. FEMA guidance is available in FEMA 320.



This In-residence Safe Room, (manufactured by a NSSA member) located in a garage protected two people (Joplin, MO).

The Case for *In-residence* Safe Rooms

Constructing a Safe Room within your home puts it as close as possible to your family. While a safe room outside of your home may provide adequate protection, it does require your family to be exposed to the weather while traveling to the safe room.

A Safe Room can be installed during the initial construction of a home or retrofitted afterward. As long as the design and construction requirements and guidance are followed, the same level of protection is provided by either type of safe room.

What does it Cost?

The cost for constructing a safe room, which can double as a closet or bathroom room, inside a new home can range from approximately \$6,500 to \$8,500. This cost range is applicable to the basic designs in FEMA 320 that provide an 8-foot by 8-foot Safe Room (approximately 64 square feet of protected space). Larger, more refined designs for greater comfort will cost more, with 14 x 14-foot safe rooms ranging in cost from approximately \$11,500 to \$13,500.

Federal Funding for Safe Room Construction

Federal programs that provide funds for safe room construction include U.S. Department of Housing and Urban Development (HUD) Block Grant funds, Federal Housing Administration (FHA) mortgage insured financing, and the FEMA Hazard Mitigation Grant Program (HMGP), and Pre-Disaster Mitigation (PDM) grant program.

Individual Homeowners do not apply directly to FEMA for Safe Room funding. To find out about potential Federal funding for Safe Rooms, contact your State Emergency Manager and/or State Hazard Mitigation Officer. FEMA provides Hazard Mitigation Assistance (HMA) funding to eligible States, Tribes and Territories that, in turn, provide the funding to local governments to assist in reducing overall risk to people and property.

Additionally, many States have developed initiatives for the construction of residential, public, and private safe rooms, including Safe Rooms in hospitals, emergency operations centers, first-responder facilities, schools, day care centers, manufactured home parks, private residences, community centers, senior centers, and campgrounds.

For more information about Safe Room funding and initiatives, visit this link: http://www.fema.gov/plan/prevent/saferoom/sr_inits.shtm

Safe Rooms and Flooding Hazards

Safe Rooms should not be constructed where flood waters have the potential to endanger occupants. Safe

Rooms in areas where flooding may occur during hurricanes should not be occupied during a hurricane. However, occupying such a safe room during a tornado may be acceptable if the safe room will not be flooded by rains associated with other storm and tornado events.

Consult your local building official or local National Flood Insurance Program (NFIP) representative to determine whether your home, or a proposed stand-alone safe room site, is susceptible to local, riverine, or coastal flooding.

Registering Your Safe Room with Local Officials

FEMA recommends that the local fire department, local emergency management agency (EMA), and other relevant local officials be given the location of the Safe Room. Providing the latitude and longitude coordinates of the entrance to the safe room to local officials can be vital in post-disaster recovery efforts. In the event that debris is surrounding or on top of the Safe Room, this will allow them to check on the safe room to make sure the occupants are not trapped inside.



Charles Prewitt of Tuscaloosa, AL has his stand-alone Safe Room registered with the local Fire Department

Emergency Supply Kits and Weather Radios

FEMA 320 includes information on preparing a family emergency plan and an emergency supply kit for a shelter. Further, all individuals living or working in tornado-

prone areas should have a battery-powered weather radio in their home or place of work.

For more information about weather radios, see Tornado Recovery Advisory No. 1 titled “Tornado Risks and Hazards in the Southeastern United States” (updated 2011).

Useful Links and Resources

Safe Room Helpline: 1-866-222-3580

Email: Saferoom@dhs.gov

FEMA’s Hazard Mitigation Assistance (HMA) policy guide has information on how funding grants for Safe Rooms may be available in your State, visit:

<http://www.fema.gov/library/viewRecord.do?id=3634>

State Hazard Mitigation Officers

<http://www.fema.gov/about/contact/shmo.shtml>

Safe Room information for Families, Builders, Employers and First Responders:

<http://highwindsaferooms.org/>

Taking Shelter from the Storm: Building a Safe Room For Your Home or Small Business (FEMA 320), August

2008, 3rd Edition <http://www.fema.gov/library/viewRecord.do?id=1536>

National Storm Shelter Association (NSSA);

<http://www.NSSA.cc>

ICC/NSSA Standard for the Design and Construction of Storm Shelters, International Code Council and the National Storm Shelter Association (ICC-500), June 2008

http://www.iccsafe.org/Store/Pages/Product.aspx?id=8850P08_PD-X-SS-P-2008-000001#longdesc

Additional information from FEMA Building Science can be found at <http://www.fema.gov/rebuild/buildingscience> and <http://www.fema.gov/plan/prevent/saferoom>

For more information on Emergency Kits visit: <http://www.ready.gov/america/getakit/index.html>