

FEMA Building Science Resources to Assist with Reconstruction after 2013 Tornadoes



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<http://www.fema.gov>

FEMA has produced numerous publications detailing best practices for natural hazard mitigation associated with tornado impacts. This flyer summarizes some of the readily available publications and resources that can be used during reconstruction following tornadoes. FEMA Building Science has also set up a website for activities and resources related to the 2013 tornadoes at <http://www.fema.gov/building-science/2013-tornadoes-building-science-activities-resources>. Links to the resources in this flyer and additional resources can be found on FEMA's safe room website at <http://www.fema.gov/safe-rooms>.

2011 Tornado Recovery Advisories

After major disasters, FEMA's Mitigation Assessment Teams (MATs) often conduct forensic investigations of building performance and publish the results in various publications. One subset of these publications is Recovery Advisories, which present guidance on design, construction, and restoration of buildings in areas subject to the effects of the particular disaster. The MAT has most recently published eight Recovery Advisories after the 2011 tornadoes in Alabama, Mississippi, Tennessee, Georgia, and Missouri. The most recent Recovery Advisories include *Rebuilding and Repairing Your Home After a Tornado*, *Residential Sheltering: In-Residence and Stand-Alone Safe Rooms*, and *Critical Facilities Located in Tornado-Prone Regions: Recommendations for Facility Owners*. All 2011 Recovery Advisories are available at <http://www.fema.gov/library/viewRecord.do?id=4723>.



Safe Room and Refuge Publications

A safe room is a hardened structure specifically designed to meet the FEMA criteria and provide “near-absolute protection” in extreme weather events, including tornadoes and hurricanes. Near-absolute protection means that, based on our current knowledge of tornadoes and hurricanes, the occupants of a safe room built in accordance with FEMA guidance will have a very high probability of being protected from injury or death. FEMA has several publications and resources that include information and design guidance for building safe rooms and selecting areas of refuge:

- FEMA L-233 brochure, *Taking Shelter From the Storm: Building a Safe Room for Your Home or Small Business* is a brochure that helps home or small business owners assess their risk and determine the best type of safe rooms for their needs. Available at <http://www.fema.gov/library/viewRecord.do?id=3510>.
- FEMA P-320, *Taking Shelter from the Storm: Building a Safe Room for Your Home or Small Business* includes guidance and design solutions for residential safe rooms. Available at <http://www.fema.gov/safe-room-resources/fema-p-320-taking-shelter-storm-building-safe-room-your-home-or-small-business>.
- FEMA P-361, *Design and Construction Guidance for Community Safe Rooms* presents information about the design and construction of community safe rooms. Available at <http://www.fema.gov/safe-room-resources/fema-p-361-design-and-construction-guidance-community-safe-rooms>.
- FEMA 431, *Tornado Protection: Selecting Refuge Areas in Buildings* presents information to help identify the best available refuge areas in existing buildings. Available at <http://www.fema.gov/mitigation-best-practices-portfolio/tornado-protection-selecting-refuge-areas-buildings-fema-431>.



