

The NSSA Process
For Assuring Quality Of Safe Rooms

presented to

National Severe Weather Workshop 2012

Norman, Oklahoma

March 1-2, 2012

presented by

Ernst W. Kiesling, P.E., Ph.D.

Texas Tech University

National Storm Shelter Association



Scenes we would like to avoid

Oklahoma City 1999

Oklahoma
1999



Tornado Damage to Elementary School *Moore, OK*



Desired Results

Harrison
Family

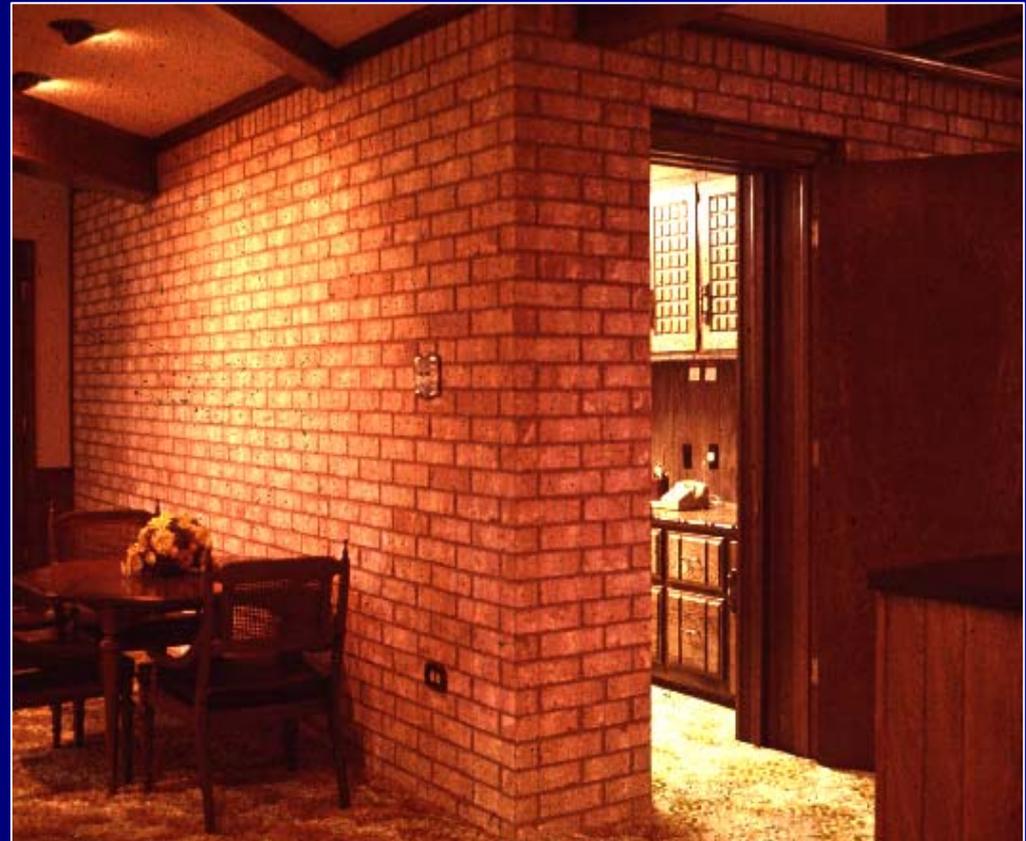


Shelter Options

- ***Many options available***
 - *Above-ground; Below-ground*
 - *Residential; Community*
 - *Indoor/outdoor*
 - *Steel, concrete, timber, fiberglass*
- ***Multiple use***

is important in assessing cost
- ***Shelters are available for new construction or retrofit***

1975



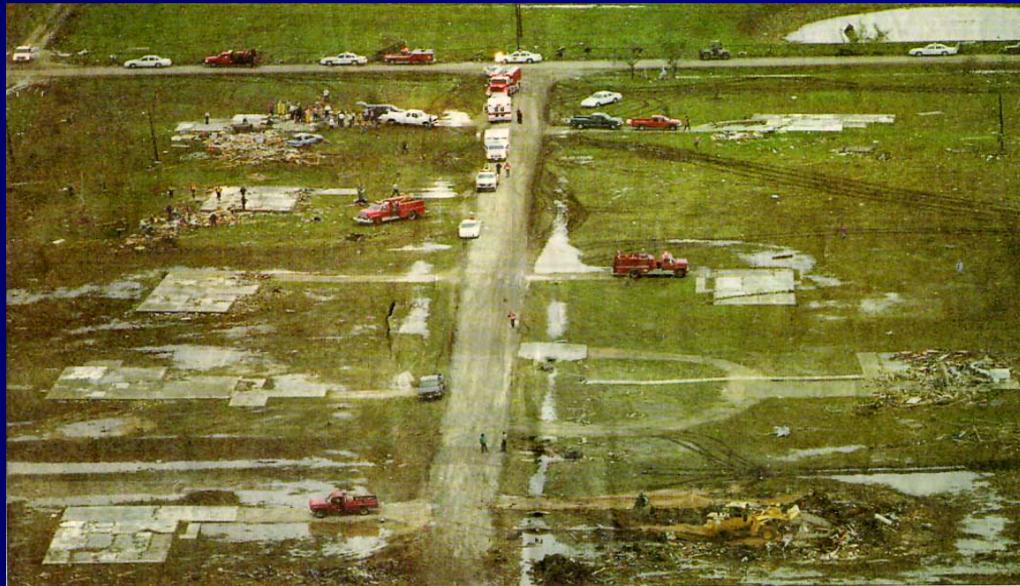
Progress in Protecting People *From Extreme Winds*

- NWS and allied agencies and persons have made great strides in warning people of impending peril
- *Lives have been saved*
- *But fear is still real and present for those who have **no place to go for safety***

Warned But Where To Go?

- Residents of Jarrell, TX had ample warning of impending, then approaching tornado
 - Many rushed home and took refuge in in their houses

Most were killed !



So What Can Be Done?

- Continue the good job of forecasting and warning
- Give accurate information
 - Without a storm shelter;
 - Develop a plan; identify the most sturdy building available
 - Go to the lowest floor, center part of the building
 - Seek protection from wind-borne debris (under a heavy piece of furniture, cover yourself)
 - Don't open windows or doors
 - Stay put
 - Encourage information gathering about storm shelters;
 - Trust established standards and FEMA Guidelines
 - Emphasize importance of accessibility

Importance of Media

- Media have been invaluable partners in:
 - Informing people when to seek refuge or shelter
 - Learning about storm shelters
 - Conducting awareness programs to the public, especially to young people

- Many have joined the National Storm Shelter Association (NSSA) as Media Partners to help disseminate accurate information

- In the long-term, you can;
 - Advocate deployment of storm shelters, especially for vulnerable populations
 - Advocate upgraded building codes to reduce property damage

Oklahoma Grant Program

1999

Incentive program in Oklahoma (nations' first) attracted shelter producers, builders and manufacturers

Lack of standards and quality control processes illuminated many quality issues.

2012

Oklahoma SoonerSafe program for storm shelters establishes high expectations for storm shelter quality.

*NSSA has pioneered in writing standards and Processes for **Standards Compliance Verification of Safe Rooms***



www.NSSA.cc

Established to

**Foster Quality in the
Storm Shelter Industry**

Membership Grades

Producer Member – Shelter Producers

Installer Member-Installs for Producer Members

Professional – Designers, Inspectors

Associate – Suppliers

Media Partner

Corporate Sponsor

Individual Sponsor



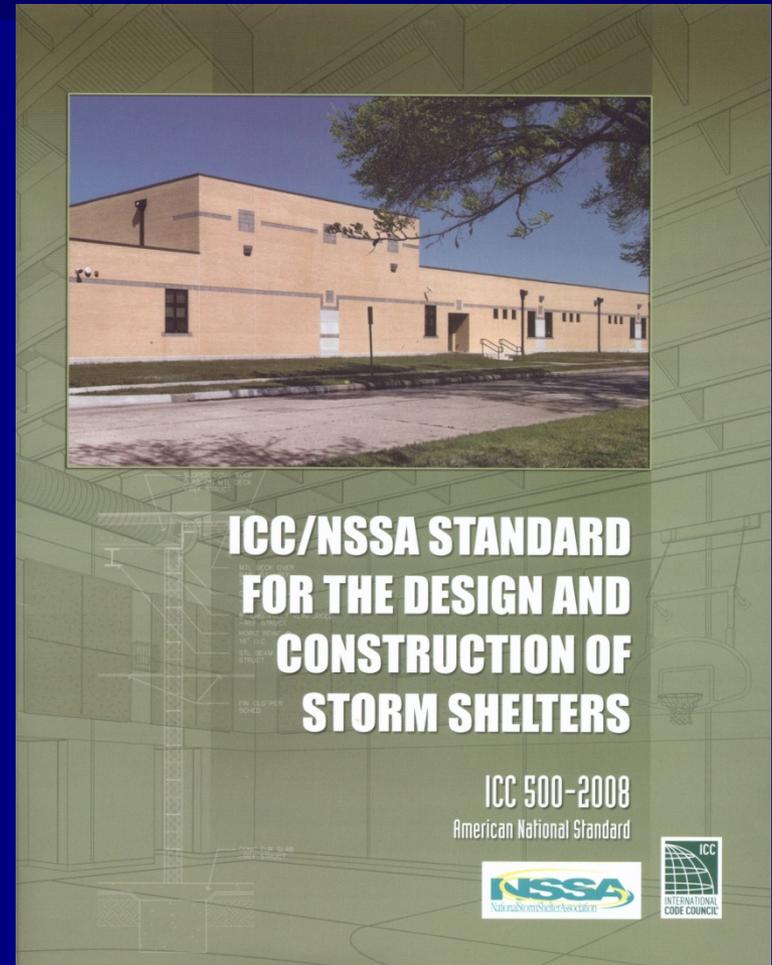
NSSA Functions

Develop Standards

2001 NSSA Industry Standard

2008 ICC/NSSA Standard

Committee has been constituted to update ICC-500 (2008) to become ICC 500-2013 or 2014



Quality Control

- NSSA PRODUCER MEMBER requirements
 - Pledge to produce only those shelters that meet the NSSA standard
 - Test shelters for debris impact resistance
 - Have independent third party compliance check
 - Affix a seal bearing serial number to each shelter
 - File a Certificate of Installation with NSSA for each shelter installed



Conclusions, Advocacies

- You may have confidence in the quality of shelters and in the producer if an **NSSA Seal** is attached
- You may advocate procuring a storm shelter for **protection** and for **peace of mind**.
 - Emphasize accessibility
 - Look for the NSSA seal

Information Sources

National Storm Shelter Association

[www. NSSA.cc](http://www.NSSA.cc)

1 (877) 700 - 6772 (NSSA)

For Testing

(806) 742 - 6772 (NSSA)



Information Sources

FEMA

SAFEROOM.dhs.GOV

866 222-3580

