

10 References

American Concrete Institute (ACI). 2008. *Building Code Requirements for Structural Concrete*, ACI 318-08. 2008 Edition. Farmington Hills, MI.

American Concrete Institute and the Masonry Society. 2008. *Building Code Requirements and Specifications for Masonry Structures*, ACI 530-08/ASCE 5-08/TMS 402-08, ACI 530.1-08/ASCE 5-08, and TMS 602-08. Boston, MA.

American Meteorological Society. 2000. *Glossary of Meteorology*.

American Society of Civil Engineers (ASCE), 1998. *Minimum Design Loads for Buildings and Other Structures*, ASCE 7-98, 05 Public Ballot Copy, American Society of Civil Engineers. Reston, VA.

American Society of Civil Engineers, *Minimum Design Loads for Buildings and Other Structures*, ASCE/SEI 7-05, 2006, American Society of Civil Engineers. Reston, VA.

American National Standards Institute and the American Forest & Paper Association. 2005. *National Design Specification® for Wood Construction*. NDS-2005.

Batts, M.E., Cordes, M.R., Russell, L.R., Shaver, J.R. and Simiu, E. 1980. *Hurricane Wind Speeds in the United States*. NBS Building Science Series 124. National Bureau of Standards, Washington, DC. pp. 41.

Carter, R. R. 1998. *Wind-Generated Missile Impact on Composite Wall Systems*. MS Thesis. Department of Civil Engineering, Texas Tech University, Lubbock, TX. May.

Clemson University Department of Civil Engineering. 2000. *Enhanced Protection from Severe Wind Storms*. Clemson University, Clemson, SC. January.

Coats, D. W., and Murray, R. C. 1985. *Natural Phenomena Hazards Modeling Project: Extreme Wind/Tornado Hazard Models for Department of Energy Sites*. UCRL-53526. Rev. 1. Lawrence Livermore National Laboratory, University of California, Livermore, CA. August.

Durst, C.S. 1960. "Wind Speeds Over Short Periods of Time," *Meteorology Magazine*, 89. pp.181-187.

Federal Emergency Management Agency. 1976. *Tornado Protection: Selecting and Designing Safe Areas in Buildings*. TR-83B. April.

Federal Emergency Management Agency. 1980. *Interim Guidelines for Building Occupant Protection From Tornadoes and Extreme Winds*. TR-83A. September.

Federal Emergency Management Agency. 1999a. *Midwest Tornadoes of May 3, 1999: Observations, Recommendations, and Technical Guidance*. FEMA 342. October.

Federal Emergency Management Agency. 1999b. *National Performance Criteria for Tornado Shelters*. May 28.

Federal Emergency Management Agency. 2000. *NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures*. 2000 Edition. Part 1: Provisions. FEMA 302.

Federal Emergency Management Agency. 2000. *Design and Construction Guidance for Community Shelters*. FEMA 361. July.

Federal Emergency Management Agency. 2002. *Rapid Visual Screening of Building for Potential Seismic Hazards: A Handbook. Second Edition*. FEMA 154. March.

Federal Emergency Management Agency. 2003. *Tornado Protection: Selecting Refuge Areas in Buildings*. November.

Federal Emergency Management Agency. 2004. *Taking Shelter From the Storm: Building a Safe Room Inside Your House*. FEMA 320. Second Edition. March.

Federal Emergency Management Agency and U.S. Fire Administration. Undated. *Emergency Procedures for Employees with Disabilities in Office Occupancies*.

Fujita, T.T. 1971. *Proposed Characterization of Tornadoes and Hurricanes by Area and Intensity*. SMRP No. 91. University of Chicago, Chicago, IL.

Holmes, J.D., Letchford, C.W., and N. Lin. 2005. "Investigations of plate-type windborne debris, Parts I and II." *Journal of Wind Engineering and Industrial Aerodynamics*, Volume 94.

HQ AFCESA/CES. *Structural Evaluation of Existing Buildings for Seismic and Wind Loads*. Engineering Technical Letter (ETL) 97-10.

International Code Council & National Storm Shelter Association. (Scheduled for release in 2008.) *Standard on the Design and Construction of Storm Shelters*. ICC-500. Country Club Hills, IL.

Kelly, D.L., J.T. Schaefer, R.P. McNulty, C.A. Doswell III, and R.F. Abbey, Jr. 1978. "An Augmented Tornado Climatology." *Monthly Weather Review*, Vol. 106, pp. 1172-1183.

Krayer, W.R. and Marshall, R.D. 1992. *Gust Factors Applied to Hurricane Winds*. Bulletin of the American Meteorology Society, Vol. 73, pp. 613-617.

Masonry Standards Joint Committee. 2002. *Building Code Requirements for Masonry Structures and Specifications for Masonry Structures*. ASCE Standard No. 5-08 / No. 6-08.

Mehta, K.C. 1970. "Windspeed Estimates: Engineering Analyses." I. 22-24 June 1970, Lubbock, TX. pp. 89-103.

Mehta, K.C., and Carter, R.R. 1999. "Assessment of Tornado Wind Speed From Damage to Jefferson County, Alabama." *Wind Engineering into the 21st Century: Proceedings, 10th International Conference on Wind Engineering*, A. Larsen, G.L. Larose, and F.M. Livesey, Eds. Copenhagen, Denmark. June 21-24. pp. 265-271.

Mehta, K.C., Minor, J.E., and McDonald, J.R. 1976. "Wind Speed Analysis of April 3-4, 1974 Tornadoes." *Journal of the Structural Division*, ASCE, 102(ST9). pp. 1709-1724.

Minor, J.E., McDonald, J.R., and Peterson, R.E. 1982. "Analysis of Near-Ground Windfields." *Proceedings of the Twelfth Conference on Severe Local Storms* (San Antonio, Texas, 11-15 January 1982). American Meteorological Society, Boston, MA.

National Concrete Masonry Association. 1972. *Design of Concrete Masonry Warehouse Walls*. TEK 37. Herndon, VA.

National Concrete Masonry Association. 2003. *Investigation of Wind Projectile Resistance of Concrete Masonry Walls and Ceiling Panels with Wide Spaced Reinforcement for Above Ground Shelters*.

O'Neil, S., and Pinelli, J.P. 1998. *Recommendations for the Mitigation of Tornado Induced Damages on Masonry Structures*. Report No. 1998-1. Wind & Hurricane Impact Research Laboratory, Florida Institute of Technology. December.

Phan, L.T., and Simiu, E. 1998. *The Fujita Tornado Intensity Scale: A Critique Based on Observations of the Jarrell Tornado of May 27, 1997*. NIST Technical Note 1426. U.S. Department of Commerce Technology Administration, National Institute of Standards and Technology, Washington, DC. July.

Pietras, B. K. 1997. "Analysis of Angular Wind Borne Debris Impact Loads." Senior Independent Study Report. Department of Civil Engineering, Clemson University, Clemson, SC. May.

- Powell, M.D. 1993. *Wind Measurement and Archival Under the Automated Surface Observing System (ASOS)*. Bulletin of American Meteorological Society, Vol. 74, 615-623.
- Powell, M.D., Houston, S.H., and Reinhold, T.A. 1994. "Standardizing Wind Measurements for Documentation of Surface Wind Fields in Hurricane Andrew." *Proceedings of the Symposium: Hurricanes of 1992* (Miami, Florida, December 1-3, 1993). ASCE, New York. pp. 52-69.
- Sciaudone, J.C. 1996. *Analysis of Wind Borne Debris Impact Loads*. MS Thesis. Department of Civil Engineering, Clemson University, Clemson, SC, August.
- Steel Joist Institute. *Steel Joist Institute 75-Year Manual 1928-2003*.
- Texas Tech University Wind Engineering Research Center. 1998. *Design of Residential Shelters From Extreme Winds*. Texas Tech University, Lubbock, TX. July.
- Texas Tech University Wind Science and Engineering Center. 2006. *A Recommendation for an Enhanced Fujita Scale (EF-Scale)*. Lubbock, TX.
- Twisdale, L.A. 1985. "Analysis of Random Impact Loading Conditions." *Proceedings of the Second Symposium on the Interaction of Non-Nuclear Munitions with Structures*. Panama City Beach, FL. April 15-18.
- Twisdale, L.A., and Dunn, W.L. 1981. *Tornado Missile Simulation and Design Methodology*. EPRI NP-2005 (Volumes I and II). Technical Report. Electric Power Research Institute, Palo Alto, CA. August.
- Vickery, P.J., Skerlj, P.F., and L.A. Twisdale, Jr. 2000. "Simulation of hurricane risk in the U.S. using an empirical track model," *Journal of Structural Engineering*, ASCE, Vol. 126, No. 10, October 2000.
- Vickery, P.J., Lin, J.X., Skerlj, P.F., and L.A. Twisdale Jr. 2000. "The HAZUS-MH hurricane model methodology part I: Hurricane hazard, terrain and wind load modeling", *Natural Hazards Review*, ASCE, Vol. 7, No. 2, May 2006.
- U.S. Department of Energy. 2002. *Natural Phenomena Hazards Design and Evaluation Criteria for Department of Energy Facilities*. DOE-STD-1020-2002. Washington, DC. January.
- Zain, Mohammed, Budek, Andrew, and Kiesling, Ernst. *Size Limits for Above-Ground Safe Rooms*. Lubbock, TX.

Storm Surge Inundation Data

Storm surge inundation data mapped for different storm levels (such as Category 1, 3, and 5 hurricanes) needed to evaluate the flood hazard as identified in Section 3.6 of FEMA 361

may not be easily obtainable in your jurisdiction. If your jurisdiction is having difficulty obtaining storm surge inundation data, you may wish to contact the National Oceanic and Atmospheric Administration (NOAA) to talk about how local governments could get a copy of the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) Display Program, which would show the storm surge inundation from different types of hurricanes. For this information, contact Dr. Wil Shaffer (301-713-1613 or wilson.shaffer@noaa.gov).

Below is a list of states and communities that provide storm surge inundation data on the internet. This list is not exhaustive, nor is it meant to be. It has been provided to allow the reader to see how these data may be collected and provided for use.

North Carolina:

These maps show fast moving and slow moving Category 1-5 hurricanes, but no elevations are listed. These were produced from the SLOSH model.

<http://www.hurricanetrack.com/ncstormsurge/comaps.html>

New Jersey:

These maps show the potential flooding from Category 1-4 hurricanes from SLOSH model results. Surge elevations are printed on the maps.

<http://www.nap.usace.army.mil/HES/nj/index.html>

Virginia:

These maps show the areas affected by each storm, but do not show the storm surge elevations associated with those storms. More details about specific properties can be obtained by contacting the emergency management office for that locality. The study was done with the Virginia Department of Emergency Management, FEMA, and the Army Corps of Engineers.

<http://www.vaemergency.com/threats/hurricane/stormsurge.cfm>

Louisiana and Mississippi:

FEMA also has some limited storm surge inundation maps available for the states of Louisiana and Mississippi. The website below provides a link to the FEMA Flood Recovery Map sites for these two Gulf Coast states, which include storm surge inundation data.

<http://www.fema.gov/hazard/flood/recoverydata/katrina>

