

Agenda

Presented by William L. Coulbourne, P.E.

Study of Tornadoes and Development of ASCE 7-22

- Definition of tornadoes and other high-wind events
- History and location of tornadoes and windstorms
- Development of ASCE/SEI 7-22
- Scope of Chapter 32 on Tornado Loads in ASCE 7-22

Location and Classification of Structures

- ASCE 7-22's tornado hazard maps
- Building risk categorization
- Meeting and exceeding standards
- Adoption and enforcement of ASCE 7 standards
- Considering climate change and increased number/magnitude of storms

Design Requirements for Risk Category III and IV Buildings

- IBC requirements for tornado protection for RC III and IV buildings
- Design provisions in ASCE 7-22 for determining tornado wind pressures
- Shelter standards
- How to achieve shelter standards

Resisting Tornadic Wind Loads on Buildings

- Magnitude of tornadic wind pressures
- Past failures and lessons learned in how to keep the building together
- Lessons learned from study of Joplin tornado, 2011
- Managing progressive collapse and failures
- Common failure modes to focus on improving

Surviving Impact Loads on Buildings

- Impact load testing
- Finding impact load test results
- Managing progressive collapse and failures
- Using ASCE 7 reliability theory

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Designing to Withstand Tornadic Loads on Buildings

Live, Interactive Webinar - Monday, June 17, 2024

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Learning Objectives

You'll be able to:

Explore the scope of Chapter 32 on tornadic loads in ASCE/SEI 7-22.

Examine ASCE 7's tornado hazard maps and building risk classification.

Consider climate change and the increased number and magnitude of storms.

Meet design requirements for Risk Category III and IV buildings.

Get tips on designing buildings to resist tornadic wind loads and impact loads.

HalfMoon Education Inc.,
Your LIVE Education Leader Presents

Designing to Withstand Tornadic Loads on Buildings

Live, Interactive Webinar - Monday, June 17, 2024



Learn from the history of past tornadic events

Explore the development of ASCE/SEI 7-22 design standard

Review risk categorization of building

Examine design requirements for Risk Category III and IV buildings

Get tips on designing to resist tornadic wind loads and impact loads

Continuing Education Credits

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6.0 PDHs

Architects
6.0 HSW CE Hours
6.0 AIA LU | HSW

International Code Council
.6 CEUs (Building)

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Webinar Information

Online - Monday, June 17, 2024	
Log into Webinar	Break
8:30 - 9:00 am CDT	12:30 - 1:00 pm CDT
Morning Session	Afternoon Session
9:00 am - 12:30 pm CDT	1:00 - 4:00 pm CDT

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Faculty

William L. Coulbourne, P.E.
Consulting Structural Engineer at Coulbourne Consulting
Mr. Coulbourne has a Civil Engineering degree from Virginia Tech and a master's degree in Structural Engineering from the University of Virginia. He has more than 50 years of experience in the engineering and construction business. Most of this experience has been focused on buildings, with the last 30 years exclusively devoted to engineering solutions for the problems created by high wind and flood events including hurricanes and tornadoes. He is considered a national expert on wind and flood hazard mitigation. Mr. Coulbourne is actively engaged in guidelines and standards used by engineering professionals and builders for improving the performance of buildings in natural hazard environments, and he has been part of damage assessment teams for many major high wind and flood events. He teaches high wind and flooding design concepts for design professionals through workshops and webinars and has authored several high wind design guides including FEMA's Coastal Construction Manual. Mr. Coulbourne is active in the engineering standards work of the American Society of Civil Engineers (ASCE) 7 minimum design loads on buildings and other structures and ASCE 24 flood resistant design and construction standard. He is a licensed professional engineer in Delaware, Virginia, and Maryland. Mr. Coulbourne has taught as an adjunct faculty member in the Civil Engineering Department of the University of Delaware.

Additional Learning

- Advanced HEC-RAS Modeling**
- Friday, May 31, 2024 | 8:30 am - 5:30 pm CDT
- Interior Acoustical Design and Construction**
- Friday, May 31, 2024 | 8:30 am - 4:30 pm CDT
- Preventing and Addressing Construction Defects and Failures**
- Friday, May 31, 2024 | 8:30 am - 5:00 pm CDT
- Understanding the NSPE Engineering Code of Ethics**
- Monday, June 3, 2024 | 11:00 am - 12:00 pm CDT
- How to Design Accessible Parking**
- Wednesday, June 5, 2024 | 10:00 am - 12:00 pm CDT
- Evaluating Eco-Friendly Insulation Options**
- Thursday, June 6, 2024 | 10:00 am - 12:00 pm CDT
- Obtaining Phase 1 and Phase 2 Environmental Site Assessments**
- Monday, June 10, 2024 | 9:00 - 11:00 am CDT

Credit Information

This webinar is open to the public and is designed to qualify for 6.0 PDHs for professional engineers and 6.0 HSW continuing education hours for licensed architects in all states that allow this learning method. Please refer to specific state rules to determine eligibility.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider License No: CEA362), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700) and North Carolina (S-0130). HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2) and §69.6(i)(2)). Other states do not preapprove continuing education providers or courses.

The American Institute of Architects Continuing Education System has approved this course for 6.0 HSW LUs (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .6 CEUs in the specialty area of Building (Preferred Provider No. 1232).

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

On-Demand Credits
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6.0 HSW LUs (AIA)

Mastering RFQ & RFP Responses: Crafting Winning Proposals
- Tuesday, June 18, 2024 | 1:00 - 3:00 pm CDT

Barrier-Free Requirements in Outdoor Spaces
- Monday, June 24, 2024 | 2:00 - 4:00 pm CDT

Brownfields Assessments, Grants and Redevelopment Opportunities
- Tuesday, June 25, 2024 | 10:00 am - 12:00 pm CDT

Generation Interconnection under the RTO Model and Changes Coming from Order 2023
- Tuesday, June 25, 2024 | 2:00 - 4:00 pm CDT

Manure Lagoon Design and Construction
- Wednesday, June 26, 2024 | 9:00 am - 12:15 pm CDT

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