

Agenda

Presented by Eugene Brislin, Jr., P.E.,

Seismology and Earthquake Actions

Earthquake characteristics Effects of soil conditions
Western, central, and eastern U.S. seismicity

Structural Dynamics and Response

Ground motions and structural response
Response spectra
Damping
Modal superposition analysis

Modern Philosophy of Seismic Design

Seismic design objectives Inelastic response and ductility
Proportioning

U.S. Seismic Codes

History
Performance objectives
Hazard levels

ASCE 7 Seismic Design

Mapped spectral response
Design response spectrum
Seismic design category and design factors
Seismic force resisting systems
Estimating period
Structural irregularities
Equivalent lateral force procedure
Load combinations, overstrength, redundancy
Diaphragms and shear walls
Deflection limitations

Material-Specific Seismic Force Resisting Systems

International Building Code (IBC) provisions
American Institute of Steel Construction (AISC 341) provisions
American Concrete Institute for Structural Concrete (ACI 318) provisions
American Concrete Institute for Masonry Structures (ACI 530) provisions

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Seismic Design and Construction

Boise, ID - Wednesday, May 27, 2020

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Learning Objectives

You'll be able to:

Describe earthquake characteristics, and consider the effects of soil conditions.

Explain the modern philosophy of seismic design.

Describe the performance objectives of U.S. Seismic Codes.

Understand and comply with the seismic design provisions of ASCE 7.

Identify material-specific seismic provisions in the International Building Code.

Consider guidance from the American Institute of Steel Construction and the American Concrete Institute.



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Study seismology, earthquake characteristics, structural dynamics and response spectra

Explore seismic design objectives and U.S. seismic codes

Review seismic design provisions in ASCE 7-10

Examine load combinations, overstrength and redundancy

Review design criteria for wood, steel, concrete and masonry buildings

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Architects

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7.0 AIA LU|HSW

International Code Council

.7 CEUs (Building)

Professional Engineers

7.0 PDHs

Construction Contractors

Non-Credit Continuing Ed.



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“Very good.” – Architect

Registration
8:00 - 8:30 am
Morning Session
8:30 am - 12:30 pm
Lunch (on your own)
12:30 - 1:30 pm
Afternoon Session
1:30 - 5:00 pm

Thurs., April 9, 2020, 11:00 AM - 12:30 PM CDT

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