

# Post-Disaster Safety Evaluation of Buildings & Infrastructure

## ATC-20, ATC-45, and Cal OES SAP Training



### Training Session

#### Post-Disaster Safety Evaluation of Buildings (ATC-20/45)

The large devastating earthquake in Nepal in 2015 and other recent large scale events are a potent reminder about the importance of disaster preparedness of our communities. After such large-scale disasters involving buildings, bridges, and critical urban infrastructure, assessing the damage and safety of this infrastructure is one of the most important first steps to disaster recovery. People are scared to return to their damaged homes, offices, and public spaces. Displaced citizens place an even greater demand on disaster response and recovery resources. Post-Earthquake, Windstorm and Flood Safety Evaluation of Buildings (ATC-20 and ATC-45) are the de facto standards for post-disaster safety evaluations of buildings in the United States and around the Pacific Rim. ATC-20/45 training is critical for our nation's disaster preparedness to quickly assess building safety in the aftermath of a major disaster and to communicate that assessment effectively to the public.

**The Structural Engineering Institute of ASCE** is hosting a 5-hour training session on post-disaster safety evaluation procedures (ATC-20/45) to help you develop the necessary skills to properly assess damaged buildings for occupancy and use following a major disaster. Taught by Structural Engineers with hands-on experience in disasters locally and internationally, you will learn current methods for performing post-disaster safety evaluations of buildings and infrastructure. Building safety evaluation exercises based on real-life examples of earthquake, tsunami, wind, and landslide damage from significant disasters in the U.S., Taiwan, China, Haiti, Chile, New Zealand and Japan will be presented.

### Training Topics

- A detailed presentation of ATC-20/45 building safety evaluation procedures.
- CAL OES SAP (California Office of Emergency Management Safety Assessment Program) training and certification will be available to licensed architects and engineers and certified building inspectors and officials.
- Training examples of damaged buildings from significant earthquakes, tsunamis, hurricanes, windstorms, floods, and landslides the United States, Chile, Haiti, China, Japan, Taiwan, and New Zealand.
- How do buildings and infrastructure structurally react to earthquake forces and other extreme loading?
- Procedures and example exercises for buildings constructed from wood, masonry, concrete, and steel.
- GREEN, YELLOW, and RED placards, what are they, what do they mean, and how do we use them?
- When and how do you perform a safety assessment and post a building?
- How to triage building safety evaluations and postings after a disaster?

WHERE Sheraton Old San Juan Hotel, 100 Calle Brumbaugh, San Juan, PR  
WHEN Saturday, October 15, 2016  
TIME 8:00 am - 2:30 pm



## Instructors

### David B. Swanson, P.E., S.E., F.SEI, M. ASCE



David is passionate about public safety, especially as it relates to how architects and engineers can lend their expertise in making our communities more disaster resilient. As a principal at Reid Middleton, Inc., Dave serves as the Director of Structural Engineering. Dave's 27 years of structural design experience includes the design and seismic rehabilitation of buildings for healthcare and other essential facilities, commercial, institutional, academic, civic, and aviation projects throughout the Pacific Rim.

Dave was recently named a Fellow to the Structural Engineering Institute of ASCE, he is a past Director of SEAW, and has represented Structural Engineers nationally as the Chair of the National Council of Structural Engineers Associations - Emergency Response Committee, and currently serves nationally on ASCE's IRD Disaster Response and Recovery Committee. Dave is a member of FEMA's Urban Search & Rescue (US&R) Washington Task Force 1, where he recently participated in the SR530 Oso Landslide response and recovery operations. He is also a certified California Emergency Management Agency "Post-Disaster Safety Assessment Program" (OES SAP) Evaluator Trainer and Coordinator.

Dave has led SEAW Disaster Reconnaissance Teams to research lessons learned from the devastating 1995 Kobe Earthquake in Japan, the 1999 Chi Chi Earthquake in Taiwan, the 2008 Wenchuan Earthquake in China, the 2010 Chile Earthquake and Tsunami, and the 2011 Christchurch, NZ and most recently, the 2011 Great East Japan (Tohoku) Earthquake and Tsunami. He also led a team of National Science Foundation researchers from the University of Washington, Georgia Tech University, and the University of Michigan in Haiti to research earthquake performance on concrete buildings in critical facilities from the devastating 2010 earthquake as well.

Dave played a key role in the leadership and development of the 2005 Seattle Fault Scenario Project and is currently working on a similar project for the San Diego region in Southern California. These collaborative seismic safety advocacy projects help assess the seismic vulnerability of each region's interdependent building, bridge, port and transportation infrastructure leading to improvements to regional seismic resilience. David has authored and published over 20 technical papers and articles on structural design of buildings and infrastructure in high seismic areas. He is a sought-after speaker on topics in structural and seismic engineering and disaster preparedness, response, and recovery from an engineers perspective.

David is a licensed Civil and Structural Engineer in WA, OR, ID, CA, HI, NV, AZ, and Guam. He received his Bachelor of Science and Master of Science Degrees in Civil and Structural Engineering from the University of Washington.

## Reid Middleton Firm Profile

Reid Middleton is a civil and structural engineering consulting firm with a 63-year history of serving public and private-sector clients throughout the western United States, Alaska, Hawaii, and the Pacific Rim. The firm focuses on specific market sectors that include aviation, civic, municipal commercial, education, healthcare, industrial, military, transportation, and waterfront. Reid Middleton serves as prime consultant to owners as well as consultants to architects and related design professionals.