BUILDING COMMUNITY PARTNERSHIPS THROUGH STRATEGIC OUTREACH

The SEAOSC Strengthening Our Cities Summit & Safer Cities Survey

Structural Engineers Association of Southern California
Annie Kao, P.E. | Simpson Strong-Tie | akao@strongtie.com
Oh, so you’re an architect?
What do structural engineers do?
Questions Structural Engineers Can Help Answer

1. What are my site’s soil conditions?
2. What is my site’s level of seismicity?
3. Are there potential hazards from neighboring structures?
4. What performance level meets my needs?
5. What kind of nonstructural damage is my building vulnerable to?
90% of our lives spent in buildings

Buildings are currently built to be disposable.

People don’t prepare for a disaster until after it happens.
What does the public need to know?

Operational  Immediate Occupancy  Life Safety  Collapse Prevention

Source: Sandeep Shah, Miyamoto
Motivation to Create Action
Social Science Research
Who do we need help from?

- Public officials
- Building officials
- Building owners
- Contractors
- Insurance companies
- Media
- Emergency managers
- Sustainability advocates
Key Summit Messages

- Do we want to live/work/play in disposable buildings?
- We know what the vulnerable buildings are, should we fix them before or after the next big earthquake?
- What building performance do you need?
Summit Speakers

- Adrin Nazarian, California 46th District State Assemblyman
- Dr. Steve McCabe, NEHRP
- Andrea Davis, The Walt Disney Company
- Dr. Michele Wood, Cal State Fullerton
- Susan Dowty, ICC
- Dr. Lucy Jones, USGS
Why do you need a structural engineer?

- Your building is a valuable asset
- You want it to perform during an earthquake
- You want it to exist after an earthquake
- You want your occupants to be safe
- You are not a structural engineer
Strategies to Manage Seismic Risk

- **MEASURE**
  - Take inventory, assess/rate, and prioritize

- **MITIGATE**
  - Seismic retrofit saves lives and is cost effective

- **INSURE**
  - Be prepared financially for recovery

- **PLAN**
  - Emergency management & business continuity
ECONOMIC REPERCUSSIONS

NEW ORLEANS VS NASHVILLE ECONOMIC GROWTH

REAL GROSS DOMESTIC PRODUCT (in Billions of Dollars)

Source: Dr. Lucy Jones, USGS
• M7.8 Earthquake
• 1800 Deaths
  – 700 from 1500 soft story & concrete building collapses
• $213 billion of economic loss throughout SoCal
  – $47.7 billion from shaking damage
  – $65 billion from fire damage
  – $96.2 billion from business interruption costs
  – $4.3 billion from traffic delays
RESILIENCE BY DESIGN

- Protect the lives of residents
- Improve the capacity of the City to respond to earthquakes
- Prepare the City to recover quickly from earthquakes
- Protect the economy of the City and all of Southern California
Soft-Story Retrofit Program

From past earthquakes, creating a “soft-story” (a lower floor that collapsed) and created a new, or non-returnable, program. The goal of the program is to improve the safety of buildings and reduce the risk of collapse during future earthquakes. The program includes:

- **Definitions**
  - General

- **Plan Check/Permit**

- **Inspection**

- **FAQs**
  - What is this program about?
  - What is the scope of this program?
  - When will I receive my order to comply?
  - What do I need to do first?
  - How do I find an Engineer?
  - How do I find an Architect?
  - How do I find a Contractor?
  - What do I do next?
  - What are the time limits to comply?
  - What do I do after a permit is issued?
Spreading Resilience
Empowering people and communities
“As other cities consider new seismic safety laws, a new survey by seismologist Lucy Jones and the Structural Engineers Assn. of Southern California found that most local governments in the region have done nothing to mandate retrofits of important building types known to be at risk, such as concrete and wooden apartment buildings.”
SEAOSC SAFER CITIES SURVEY

• Provide the first comprehensive look at city and county retrofit ordinances

• Identify vulnerable building types

• Clear recommendations to jurisdictions on how to improve
“Nearly every existing building gains little to no benefit from continued code enhancements.”
Qualified SEAOSC members who can review proposed building ordinances and offer recommendations to proposed regulations and programs.
Los Angeles Times

Live in Santa Monica, West Hollywood, or Beverly Hills? Quake retrofits for apartments may be coming to you

November 18, 2016
More SoCal cities jumping on board!
STRATEGY: CREATE A STRATEGY

Partner with outreach professionals

Create a committee to map out objectives, audience, short-range, and long-range visions

Develop messaging and communication avenues

Recommend tactics to the Board for action and execution
STRATEGY: INTERNAL

- Develop consistent talking points for all members
- Engage non-members
- Maintain useful website
- Provide advisory role to building departments
- Participate in outreach efforts
LET'S WORK TOGETHER TO BUILD A SAFER CALIFORNIA

www.SEAOSC.org
seaosc@seaosc.org