



STRUCTURAL EXTREME EVENTS RECONNAISSANCE

JUSTIFICATION FOR LEVEL OF ACTIVATION

Event:

22 September 2022, Mexico, Mw 6.8 Earthquake

Release Date:

27 September 2022

Summary: StEER was asked to evaluate possible responses to this event, based on the criteria in Tables 1-2. Since a majority of the Level 1 and 2 criteria were satisfied, <u>StEER will not activate for this event</u>, but will provide editorial review and feedback to EERI LFE on its report.

Table 1: Level 1 Activation Criteria for major hazard event with the potential to generate new knowledge		
Hazard	Exposure	Feasibility
✓ Major intensity event ■ Earthquake-M 5.5	 ✔ Population ◆ Sufficiently populated areas to create measurable impact (PAGER Yellow alert) 	✓ ResourceAvailability/interest of members
□ Long duration event • Earthquake - Subduction zone EQ	Community Repeated exposure to earthquake events	 Media Sufficient media/social media coverage of the event, including the potential to automate the mining of information
✓ Succession of events ■ Earthquake - Sequence of earthquakes/ aftershocks	□ Code validation ■ Noteworthy code or construction practices	□ Bandwidth of StEER support team ■ Multiple concurrent responses
□ Joint/compounding hazards ■ Earthquake-landslide, liquefaction, fire, flooding (from dam break)	□ Infrastructure of interest	
	□ Existence of models or measurements • Instrumented structures Digital twins • Testbeds	
6/12 (50%) of Level 1 Criteria Satisfied		







Table 2: Level 2 activation criteria for major hazard event with evidence of the ability to generate new knowledge			
Hazard	Exposure	Feasibility	
Design-Level Event Hazard intensity meets or exceeds code-mandated or PBE-adopted levels Design-Level Event Research R	 ✔ Infrastructure of interest Unreinforced masonry and non-ductile concrete single family residential buildings 	 Resources Availability/interest of members in the impacted region Availability of sufficient support from regional nodes Availability of imaging hardware 	
□ Unique Hazard characteristics ■ Unusual ground motion characteristics	 Community Impacts Significant fatalities Potential for prolonged downtime and recovery 	 Access and safety Driving access to affected areas Safety (security, public health - e.g., COVID) 	
	□ Relevance to US Practice • For international events	✓ Collaboration Potential GEER plans deployment	
3/8 (37.5%) of Level 2 Criteria Satisfied			



