

Tall Buildings Initiative Task 12 Project
Quantification of Seismic Performance Levels of Tall Buildings

Goal: To quantify “higher seismic performance” for new tall buildings in coastal California.

Objectives of Task 12 Quantification of Seismic Performance Levels of Tall Buildings:

PEER coordinates a research project to address the following issues for new tall buildings in the State of California. Specific sub-tasks are as follows:

Task 12A: Select Three Building System Types (two concrete and one steel) and Site

Task 12B: Develop Three Designs for Each of Three Building System Types (Nine Designs Total)

Task 12C: Conduct Nonlinear Response History Analysis of Nine Computer Building Models

Task 12D: Compute Statistics of Response Quantities and Make Comparisons

Task 12E: Estimate Initial Construction Costs and Financial Values for Each Design

Task 12F: Estimate Direct and Indirect Losses from Future Earthquakes for Each Design

Task 12G: Develop a benefit-cost analysis for Each Design

Task 12H: Convey Preliminary Results to the Seismic Safety Commission and OES

Task 12I: Conduct an Invitational Workshop to Obtain Feedback from the Community

Task 12J: Conduct a Public Workshop to Disseminate the Findings

Task 12K: Develop and Disseminate a Final Report