

Draft Preface for the Guidelines for the Seismic Retrofit of Existing Buildings
Appendix Chapters to the International Existing Building Code

Chapters 1 through 4 of these Guidelines are intended to reduce risk, be cost-effective, and easily enforceable. They were developed by the Structural Engineers Association of California's Existing Building Committee and the International Code Council from practical retrofit experience and engineering judgement. They address four common building systems that tend to be vulnerable to earthquakes: Unreinforced masonry bearing wall buildings in Chapter 1; Tiltups and similar flexible-diaphragm buildings in Chapter 2; Wood frame dwellings with inadequately braced cripple walls in Chapter 3; and Multi-unit residential buildings with soft or weak stories or open fronts in Chapter 4.

These chapters were developed before the emergence of modern Performance Based Earthquake Engineering (PBEE) as currently described in FEMA 356, ASCE 31, ATC 55 and ATC 58. These chapters do not state or imply that retrofits will meet PBEE objectives or ranges. These chapters do not necessarily address all vulnerabilities nor are they calibrated using PBEE.

Chapter 5 provides an adoption framework for nonductile concrete retrofits, a condensed evaluation checklist derived from ASCE 31, as well as clarifications and analytical alternatives to PBEE Coefficient and Capacity Spectrum Methods.