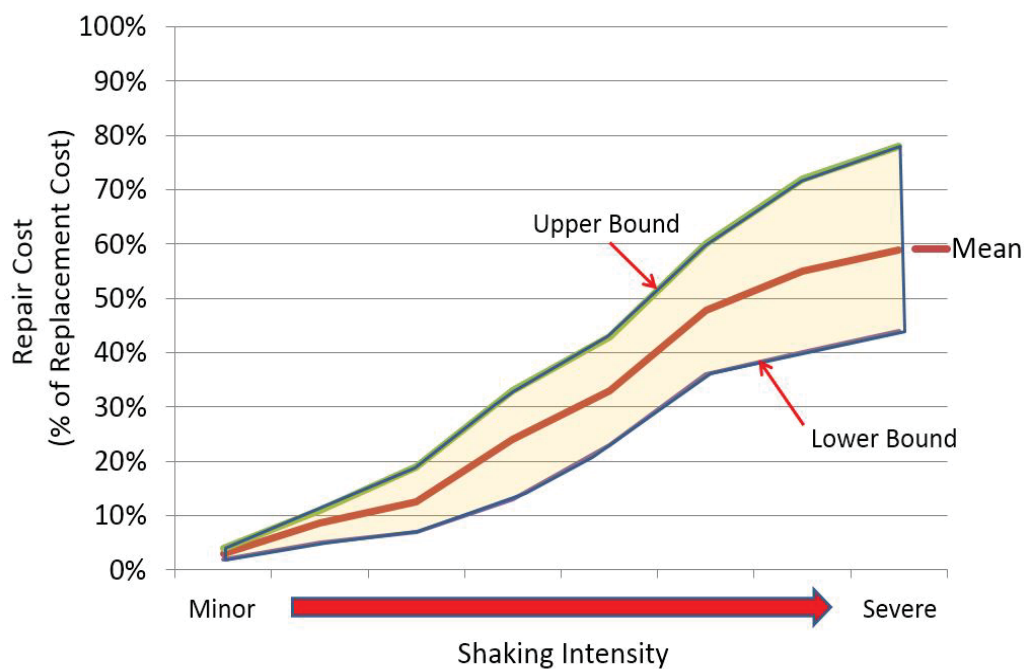


Proceedings of FEMA-sponsored workshop on communicating seismic performance metrics in design decision-making



ATC Applied Technology Council

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Cover illustration: Variation in repair cost (percentage of replacement cost) as a function of shaking intensity (courtesy of John Gillengerten).

ATC-58-4

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Decision-Making**

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by

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Preface

In 2012, the Applied Technology Council (ATC) completed a 10-year program under contract with the Federal Emergency Management Agency (FEMA) to develop a next-generation methodology for seismic performance assessment of buildings. This program was conducted under a series of projects known as the ATC-58/ATC-58-1 Projects. The resulting products, collectively referred to as FEMA P-58, *Seismic Performance Assessment of Buildings, Methodology and Implementation*, describe a general methodology and recommended procedures to assess the probable seismic performance of individual buildings based on their unique site, structural, nonstructural, and occupancy characteristics. In the FEMA P-58 methodology, seismic performance is characterized on a probabilistic basis in terms of the potential for incurring damage or losses in the form of repair costs, repair time, casualties, unsafe placarding, and environmental impacts.

In 2012, FEMA funded a subsequent 5-year program (identified as Phase 2) to utilize the performance assessment methodology in benchmarking the performance of U.S. model codes and seismic design standards and in developing performance-based seismic design criteria. Designated the ATC-58-2 Project, the purpose of this next phase of work is to: (1) develop products that assist stakeholders in selecting appropriate performance objectives for buildings of different occupancies; and (2) assist design professionals in efficiently developing building designs that meet these objectives.

This *FEMA-Sponsored Workshop on Communicating Seismic Performance Metrics in Design Decision-Making* is the first major effort conducted under the Phase 2 program. The purpose of this workshop was to better understand how seismic performance information factors into the decision-making needs of various stakeholder groups. Attendees included a broad range of stakeholders involved in building design, construction, and management decision-making, including owners and developers, financial and insurance representatives, institutional and corporate building managers, building officials, civic building managers, and design professionals. Information gathered during this workshop will be used to guide the ATC-58-2 Project Team in developing a comprehensive series of performance-based design guides for stakeholders and design professionals.

ATC is indebted to the members of the ATC-58-2 Project Team who planned and organized the workshop, including Ron Hamburger (Project Technical Director), members of the Project Management Committee including John Gillengerten, Bill Holmes, John Hooper, and Laura Samant, and members of the Stakeholder Products Team including Maryann Phipps and Tom Tobin.

ATC gratefully acknowledges the group of invited workshop participants for their contributions to workshop plenary and breakout discussions, especially Ross Asselstine, Fouad Bendimerad, and Doug DeVeney who agreed to present their individual stakeholder perspectives in plenary sessions. ATC is also indebted to the members of the ATC-58-2 Project Steering Committee that attended the workshop, including Lucy Arendt, Christopher Deneff, John Price, Jon Siu, Jeff Soulages, and Eric Von Berg. The names and affiliations of all who attended the workshop are provided in Appendix A.

ATC also gratefully acknowledges funding provided by the Federal Emergency Management Agency, guidance and support in the conduct of this work provided by Michael Mahoney (FEMA Project Officer) and Robert Hanson (FEMA Technical Monitor), workshop logistical support provided by Bernadette Hadnagy (ATC), and report production services provided by Amber Houchen (ATC).

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