

**ASTM Task Group E06.25.83**  
**PML Assessment of Windstorm Damage to Buildings**  
**AGENDA**

Draft of December 12, 2006

- I. Roll Call
- II. Introduction – Gerald Davis
- III. Who are Stakeholders in this Windstorm Standard?

<u>Providers</u>	<u>Users</u>	<u>Other Stakeholders</u>
Engineering Consultants	Real Estate Owners	Windstorm Insurers
Insurance Risk Modelers	Real Estate Lenders & Investors	Building Material Manufacturers
Others _____	Real Estate Bond Buyers	FEMA
	Real Estate Bond Rating Agencies	ASTM
	Others _____	Others _____

- IV. Should this be a *Standard Guide* or a *Standard Practice* or both?

Below are definitions from the *ASTM Form and Style Manual*, commonly known as the "Blue Book":

Guide, n--a compendium of information or a series of options that does not recommend a specific course of action.  
Discussion--A guide increases the awareness of information and approaches in a given subject area.

Practice, n -- a definitive set of instructions for performing one or more specific operations that does not produce a test result. Discussion-- Examples of practices include but are not limited to: application, assessment, cleaning, collection, decontamination, inspection, installation, preparation, sampling, screening, and training.

- V. What is the objective of this Standard?

As a aid to answering this question, below is language adapted from Section 1.2 of the *Standard Guide for the Seismic Risk Assessment of Buildings*:

1. To synthesize and document guidelines for risk assessment of buildings from windstorms;
2. To encourage standardized windstorm risk assessment;
3. To establish guidelines for field observations of the site and physical conditions, and the document review and research considered appropriate, practical, sufficient, and reasonable for windstorm risk assessment;
4. To establish guidelines on what reasonably can be expected of and delivered by a Provider in conducting the windstorm risk assessment of buildings.
5. To establish guidelines on appropriate field observations and analysis for conducting a windstorm risk assessment;
6. To establish guidelines by which a Provider can communicate to the User observations, opinions, and conclusions in a manner that is meaningful and not misleading either by content or by omission.

Below is language adapted from Section 1.1 of the *Standard Practice for Probable Maximum Loss (PML) Evaluations for Earthquake Due-Diligence Assessments*:

7. This Practice establishes practice and standard-of-care for evaluation and classification of the financial risks from windstorm damage to real estate improvements for use in financial transactions. As such, this Practice permits a User to satisfy, in part, their real estate transaction due-diligence requirements with respect to assessing and characterizing a property's potential losses from windstorms. This Practice is intended to address only physical damage to the property from site and building response.

Here is alternate language to item #7 above (suggestion from co-chair):

8. To provide a commercially reasonable and appropriate minimum acceptable level of evaluation for the probable maximum loss to a building due to windstorm events.

VI. What should the Scope of the Standard include?

1. Building damage associated with windstorms only (including windborne debris, wind driven rain, etc.)
2. Building damage associated with windstorms and storm surge flooding
3. Building damage associated with windstorms and all flooding

VII. Should the ASTM Seismic Standard (E06.26) be used as an outline and/or template for the Windstorm Standard?

(See ASTM Seismic Standard E06.26 outline below)

VIII. Assigning Tasks and Responsibilities

IX. Schedule

X. Next Meeting date

# Standard Guide for the Seismic Risk Assessment of Buildings

## INTRODUCTION

Lenders, insurers, and equity owners in real estate are giving more intense scrutiny to earthquake risk than ever before. The 1989 Loma Prieta, California earthquake, which caused more than \$6 billion in damage, accelerated the trend toward considering loss estimation in real estate transactions. The 1994 Northridge, California earthquake, with over \$20 billion in damage, made seismic risk assessment an integral part of real estate financial decision-making for regions at risk of damaging earthquakes. Users of Seismic Risk Assessment reports need specific and consistent measures for assessing the possibility of future loss due to earthquake occurrences. This Standard Guide (Guide) discusses specific approaches that the real estate and technical communities can consider a basis for characterizing the seismic risk assessment of buildings in an earthquake. It uses two concepts to characterize earthquake loss: probable loss (PL) and scenario loss (SL). Use of the term probable maximum loss (PML) is acceptable, provided it is specifically and adequately defined by the User.

1. Scope
2. Reference Documents
3. Terminology
4. Significance and Use
  - 4.1 Uses
  - 4.2 Principles
  - 4.3 Subsequent Use of Seismic Risk Assessment
  - 4.4 New investigations supercede older ones
5. Assessment Methodology and Approach
  - 5.1 Minimum Requirements
  - 5.2 Level of Investigation
  - 5.3 Seismic Risk Assessment for Multiple Buildings
  - 5.4 Retrofit Scheme development
6. Individuals Involved and Their Responsibilities
  - 6.1 General
  - 6.2 Provider Minimum Qualifications
  - 6.3 Evaluation of Personal Qualifications and Experience of Providers
  - 6.4 Independent Peer Review
7. Seismic Ground Motion Hazard Assessment
  - 7.1 Objective
  - 7.2 Levels of Investigation
8. Building Stability Assessment
  - 8.1 Objective
  - 8.2 Levels of Investigation
  - 8.3 Conclusions and Findings
  - 8.4 Level BS0 Investigation
  - 8.5 Level BS1 Investigation
  - 8.6 Level BS2 Investigation
  - 8.7 Level BS3 Investigation
9. Site Stability Assessment
  - 9.1 Objective
  - 9.2 Levels of Investigation
  - 9.3 Level SS0 Investigation
  - 9.4 Level SS1 Investigation
  - 9.5 Level SS2 Investigation
  - 9.6 Level SS3 Investigation
10. Building Damageability Assessment
  - 10.1 Objective
  - 10.2 Levels of Investigation
  - 10.3 Scope of damageability analysis
  - 10.4 Level BD0 Investigation
  - 10.5 Level BD1 Investigation
  - 10.6 Level BD2 Investigation

10.7 Level BD3 Investigation

11. Building Content Damageability Assessment

11.1 Objective

11.2 Type and Levels of Content Damageability Assessment

11.3 Levels of Investigation for Content Damageability Assessment

11.4 Level C0 Investigation

11.5 Level C1 Investigation

11.6 Level C2 Investigation

11.7 Level C3 Investigation

12. Business Interruption Assessment

12.1 Objective

12.2 Related Investigations

12.3 Type of Business Interruption Assessment

12.4 Business Interruption Assessment

12.5 Levels of Investigation in Business Interruption Assessment

12.6 Level B0 Investigation

12.7 Level B1 Investigation

12.8 Level B2 Investigation

12.9 Level B3 Investigation

13. Report Requirements

# Standard Practice for Probable Maximum Loss (PML) Evaluations for Earthquake Due-Diligence Assessments

## INTRODUCTION

The Standard Practice for Probable Maximum Loss (PML) Evaluations for Earthquake Due Diligence Assessments is intended to provide Users with an evaluation norm for the characterization of the risks posed by earthquakes to real estate for use in making equity investments, lending, and financial transactions, including securitized mortgage lending by mortgage originators, underwriters, rating agencies, and purchasers of bonds secured by the real estate. Specific requirements are provided for *Commercial Mortgage-Backed Securities (CMBS)* and for other financial and commercial real estate transactions.

1. Scope
2. Reference Documents
3. Terminology
4. Significance and Use
5. Due-Diligence Investigation

Appendix A – Level of Investigation