

Publications

ATC-13-1 Report

The Applied Technology Council (ATC) has announced the release of *ATC-13-1: Commentary on the Use of ATC-13 Earthquake Damage Evaluation Data for Probable Maximum Loss Studies of California Buildings*. The purpose of the *Commentary* is to provide guidance to consulting firms who are using *ATC-13* expert-opinion data (published by ATC in 1985) for probable maximum loss (PML) studies of California buildings.

The report explains the development of the *ATC-13* expert-opinion estimates of physical damage caused by earthquakes, the limitations of the *ATC-13* data, and the issues associated with using the data for PML studies. The document stresses that the *ATC-13* data were developed to estimate the average seismic performance of large numbers of buildings and thereby estimate earthquake losses on a regional basis; they were never intended to be used for single-building damage and loss assessment.

The 66-page *ATC-13-1 Commentary* was funded by the ATC Henry J. Degenkolb Memorial Endowment Fund. All proceeds from the sale of the report will be deposited into this fund. Copies of the *ATC-13-1 Commentary* can be obtained from ATC (www.ATCCouncil.org). The price is \$30 per copy (plus sales tax for California residents, plus shipping).

FEMA 395 Manual

The Federal Emergency Management Agency has released *FEMA 395, Incremental Seismic Rehabilitation of School Buildings (K-12)*. The principal authors are Frederick Krimgold, David Hattis, and Melvyn Green. This 73-page manual presents an innovative approach that phases in a series of discrete rehabilitation actions implemented over a

period of several years (incremental seismic rehabilitation), to create an effective, affordable, and non-disruptive strategy for responsible mitigation action. It can be integrated efficiently into ongoing facility maintenance and capital improvement operations to minimize cost and disruption. It provides school administrators with the information necessary to assess the seismic vulnerability of their buildings and to implement a program of incremental seismic rehabilitation for those buildings.

The report is in three parts: Critical Decisions for Earthquake Safety in Schools; Managing the Process for Earthquake Risk Reduction in Existing School Buildings; and Tools for Implementing Incremental Seismic Rehabilitation in School Buildings. The report can be downloaded from www.edfacilities.org/pubs/schools.pdf.

ERES 2003 Proceedings

The *Proceedings of the Fourth International Conference on Earthquake Resistant Engineering Structures (ERES)* are available from WIT Press. The conference took place September 22-24, 2003 in Ancona, Italy. The papers are authored by scientists working in industry as well as in academic and research institutes around the world and are organized into the following sections: Earthquake-Resistant Design; Bridges; Seismic Behaviour and Vulnerability Analysis; Seismic Isolation and Control; Monitoring and Testing; Passive and Active Control; and Ground Conditions and Site Effects.

The 400-page book, edited by G. Latini of the Università Politecnica delle Marche in Italy and C.A. Brebbia of the Wessex Institute of Technology in the United Kingdom, costs US\$211 (Euro198) and may be purchased from www.witpressusa.com/acatalog/9844.html.

Learning from Earthquakes

7.3 Earthquake in Russia

The following preliminary summary was submitted by EERI member Mark Klyachko of the Ministry of Construction, Kamchatka, Russia.

A $M_w = 7.3$ earthquake occurred on September 27, 2003 at 6:33 p.m. local time in the rural area of the Gorny Altai region of southwestern Siberia, Russia (49.98N, 87.90E, depth of focus 16 km).

In the epicentral zone, where about 40 villages and small towns are located, earthquake intensities reached 7-8 (MSK/EMS). The earthquake was felt with intensities of 3-4 in parts of Siberia, including the cities of Kemerovo and Novosibirsk. Intensity in the city nearest to the epicenter, Barnaul, was estimated at about 5-6. The population in the epicentral area is approximately 24,500.

About 900 houses, mostly single-story masonry, were damaged (intensity of 2-4 MSK/EMS). There were three fatalities and about 1,800 people were left without homes. Seven hospital buildings and a few schools were not serviceable. The water supply completely stopped. Landslides occurred in the Kosh-Agach and Ust-Ulagan areas, and the Chuya River flooded. A special team of the Russian Federation's Ministry of Civil Defense, EMERCOM, went to the affected area and erected 1,000 temporary shelters.

According to the seismic zonation map for Russia, this area is estimated to be seismically active. This earthquake is the largest in this region since an event on December 20, 1761, that is thought to have had a magnitude of about 7.7. Macro-seismic field investigations will be organized to improve the understanding of the seismicity of the region.