

ATC-51-1

Recommended U.S.-Italy Collaborative Procedures for Earthquake Emergency Response Planning for Hospitals in Italy

by

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Preface

In 2001, the Servizio Sismico Nazionale of Italy (Italian National Seismic Survey, NSS¹) awarded a contract to the Applied Technology Council (ATC) of the United States to develop procedures for earthquake emergency response planning for hospitals in Italy (ATC-51-1 project). The project was conducted as the second phase of a larger cooperative program being conducted by NSS and ATC to develop recommendations to improve hospital seismic safety in Italy. The program's collaborative recommendations are based on the perspectives, experience and knowledge of specialists (from both countries) in earthquake engineering, hospital seismic safety, and hospital regulation.

Under the first phase of the program, ATC and NSS developed a series of over-arching recommendations for the program. The recommendations from the first phase are documented in the ATC-51 report, *U.S.-Italy Collaborative Recommendations for Improving the Seismic Safety of Hospitals in Italy* (ATC, 2000).

The ATC-51-1 project (the second phase of the program) addressed one of the short-term recommendations — planning for emergency response and postearthquake inspection — made in the first phase (ATC-51 project). The phase two recommendations were developed considering current practices for emergency response planning in the United States and available NSS information and regulations pertaining to hospital emergency response planning in Italy.

Project activities included: (1) a visit by U.S. specialists to Italy to inspect representative hospital facilities and discuss earthquake emergency response and postearthquake inspection procedures; (2) a review of the NSS-provided information by the Project Advisory Panel (PAP); (3) development of recommendations during a project meeting in

California in April 2002; and (4) a visit by project participants from Italy to hospital sites in the San Francisco Bay area to discuss emergency response and postearthquake inspection procedures.

This report contains: (1) descriptions of current procedures and concepts for emergency response planning in the United States and Italy, (2) an overview of relevant procedures for both countries for evaluating and predicting the seismic vulnerability of buildings, including procedures for postearthquake inspection, (3) recommended procedures for earthquake emergency response planning and postearthquake assessment of hospitals, to be implemented through the use of a Postearthquake Inspection Notebook and demonstrated through the application on two representative hospital facilities; and (4) other recommendations, including emergency response training, postearthquake inspection training, and mitigation of seismic hazards.

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¹NSS is one of the offices of the Department of Civil Protection of the Office of the Prime Minister of Italy. Its institutional duties include: (1) definition of general criteria for seismic zonation; (2) assessment and mitigation of the seismic vulnerability of buildings and other infrastructure; (3) forecasting the consequences of seismic events; (4) guidelines for the preservation of particularly vulnerable structures like ancient buildings, historic towns, and structures providing Italy's cultural heritage; (5) experiments on structures, and the study of innovative techniques for seismic protection, (6) management and upgrading of the free-field national accelerograph network, and (7) information dissemination, education, and technical training in the field of engineering seismology and earthquake engineering.

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