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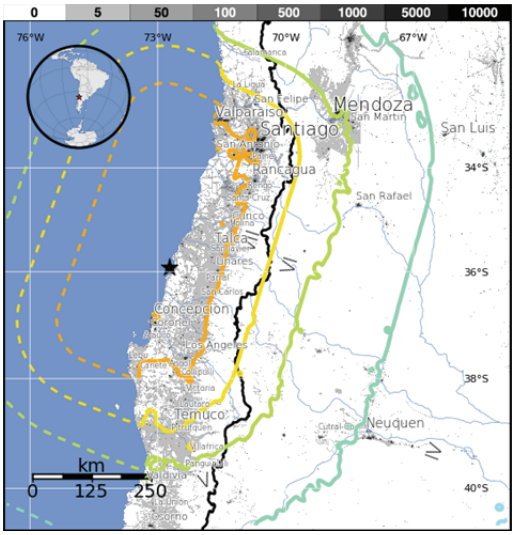

Comparison of U.S. and Chilean Building Code Requirements and Seismic Design Practice 1985–2010

NEHRP Consultants Joint Venture
A partnership of the Applied Technology Council and the Consortium of Universities for Research in Earthquake Engineering

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Cover photo – Isoseismal Map, February 27, 2010, Maule earthquake (United States Geological Survey, 2011)

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Prepared for
U.S. Department of Commerce
National Institute of Standards and Technology
Engineering Laboratory
Gaithersburg, MD 20899

By
NEHRP Consultants Joint Venture
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October 2012

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Preface

The NEHRP Consultants Joint Venture is a partnership between the Applied Technology Council (ATC) and the Consortium of Universities for Research in Earthquake Engineering (CUREE). In 2007, the National Institute of Standards and Technology (NIST) awarded a National Earthquake Hazards Reduction Program (NEHRP) "Earthquake Structural and Engineering Research" contract (SB1341-07-CQ-0019) to the NEHRP Consultants Joint Venture to conduct a variety of tasks, including Task Order 10279 entitled "Comparison of Present Chilean and U.S. Model Building Code Seismic Provisions and Seismic Design Practices."

This work is part of a series of investigations into the performance of engineered construction during the February 27, 2010, Maule earthquake in Chile. It is intended to provide an understanding of the similarities and differences between U.S. and Chilean seismic design codes and practices so that meaningful conclusions can be drawn from the observed performance of buildings in Chile, and that seismic-resistant construction can be improved in the United States.

The NEHRP Consultants Joint Venture is indebted to the leadership of Ron Hamburger, Project Director, and to the members of the Project Technical Committee, consisting of Loring Wyllie, Patricio Bonelli, and Rene Lagos, who identified and compared relevant code provisions and seismic design practices, and developed the resulting observations and conclusions. Working groups, consisting of Ady Aviram and Jose Flores Ruiz, provided translation services and performed comparative design studies. A special debt of gratitude is owed to our Chilean partners who collected and generously shared seismic design provisions, material design standards, ground motions, comparative studies, and other information that was instrumental in performing this work. The names and affiliations of all who contributed to this report are provided in the list of Project Participants.

The NEHRP Consultants Joint Venture also gratefully acknowledges Jack Hayes (NEHRP Director) and Steve McCabe (NEHRP Deputy Director) for their input and guidance in the preparation of this report, and Peter N. Mork for ATC report production services.

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