

ATC-17

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BASE ISOLATION AND PASSIVE ENERGY DISSIPATION

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PREFACE

In March 1986 Applied Technology Council (ATC) conducted a two-day seminar on base isolation and passive energy dissipation. The overall purpose of the seminar was to present a complete picture of current informed thinking on the use of base isolation, energy-dissipation, and damping in the seismic design of structures. The seminar, held in San Francisco and attended by approximately 200 practitioners and researchers, was followed by a one-day workshop to develop recommendations for future research needs, recommended research tasks, and a time table for carrying out those tasks.

This report contains the technical papers presented at the seminar as well as the proposed research agenda developed during the workshop. Included are more than 40 technical papers discussing theoretical principles, applications, case studies, and design issues, including ground motion, structural considerations, and practical issues associated with the use of base-isolation and passive energy-dissipation devices.

ATC gratefully acknowledges the many individuals who contributed to the success of the seminar and workshop. A. J. Eggenberger of the National Science Foundation provided valuable assistance, support and cooperation throughout the duration of the project. Steering Committee members Robert D. Hanson, Gary C. Hart, Wilfred D. Iwan, William B. Joyner, James M. Kelly, Onder Kustu, Ronald L. Mayes, Clarkson W. Pinkham, and Edwin G. Zacher developed the seminar and workshop programs, reviewed seminar technical papers, and served as workshop working group session/topic chairmen. Sheldon Cherry, Asadour H. Hadjian, Lindsay R. Jones, J. P. Singh and Charles C. Thiel, Jr. (working group co-chairman), recorded the conclusions and recommendations of the working groups. Nancy J. Day, ATC Office Administrator, served as seminar and workshop registrar and arranged hotel/seminar/workshop accommodations. Joann T. Dennett, Patricia Weis, and Janet Richter of Rdd Consultants operated the press room, recorded seminar discussions, and edited the proposed research agenda. Patricia M. Wong of ATC compiled the final report.

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