

**ATC-9**

**AN EVALUATION OF THE IMPERIAL COUNTY SERVICES BUILDING  
EARTHQUAKE RESPONSE AND ASSOCIATED DAMAGE**

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## PREFACE

Following the October 15, 1979 Imperial Valley, California, earthquake, the National Science Foundation (NSF) awarded grants to several researchers and organizations to study the Imperial County Services Building, a 6-story reinforced concrete frame and shear-wall building severely damaged by that earthquake. The performance of the building was of special interest to the earthquake engineering profession because the building had been designed to meet most of the requirements of the 1967 Uniform Building Code (UBC) and because it contained an extensive array of strong-motion instruments that recorded the building's response to the earthquake. Applied Technology Council (ATC), the recipient of one of the NSF awards, was selected to investigate the seismic design of the building, evaluate the damage that had occurred, determine what changes would have been necessary to meet the requirements of later editions of the UBC and the ATC-3-06 report, "Tentative Provisions for the Development of Seismic Regulations for Buildings," and develop recommendations for code changes for later consideration by appropriate code committees. The results of the ATC investigation are reported in this document.

Atkinson, Johnson and Spurrier, Inc., of San Diego, a structural engineering firm familiar with design and construction practices in El Centro, site of the Imperial County Services Building, was selected as project subcontractor to conduct the investigation. Mr. Edwin Johnson served as project manager. As is typical of ATC projects, the work of the subcontractor was reviewed by a Project Advisory Panel composed of individuals with in-depth experience in structural engineering. The Panel included the chairmen of the Seismology Committee of the four member associations of the Structural Engineers Association of California (Central California, Northern California, San Diego, and Southern California associations) and the Principal Investigator, Roland L. Sharpe.

ATC gratefully acknowledges the technical input and insight provided by Professors Vitelmo Bertero and Stephen Mahin of the University of California at Berkeley, and the encouragement, cooperation and patience provided by Dr. John B. Scalzi, Program Director for Dynamic Structural Experimentation, Civil and Environmental Engineering Division, National Science Foundation.

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