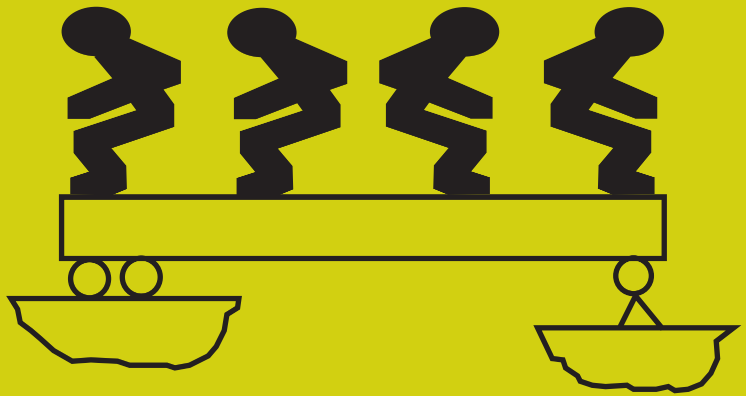
ATC Design Guide 1

# Minimizing Floor Vibration



Applied Technology Council

# Applied Technology Council

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# **Minimizing Floor Vibration**


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# Preface

This document is the first in the new Design Guide series developed by the Applied Technology Council Board of Directors. The series presents succinct, state-of-the-art information on important design issues for practicing structural engineers. The document was developed with funding from the Henry J. Degenkolb Memorial Endowment Fund of the Applied Technology Council (ATC).

This first ATC Design Guide provides guidance on design and retrofit of floor structures to limit transient vibrations to acceptable levels, recognizing that "acceptable levels" is a somewhat subjective measure. The document also includes guidance for estimating floor vibration properties and example calculations for a variety of floor types and design conditions.

The criteria provided in this guide for acceptable levels of floor vibration are based on human sensitivity to floor vibration, whether it is caused by human behavior or machinery in the structure. Other sources of floor vibration such as vehicular traffic, internal or external to the building, are not covered in this document. The criteria apply to floors made from most currently used construction materials.

ATC gratefully acknowledges the contributions of David Allen, the principal author of the report, co-authors Donald Onysko and Thomas Murray, and Project Engineering Panel members C. Mark Saunders (Chair), Colin Gordon, and Emmanuel Velivasakis, who provided overview and guidance for the project. A. Gerald Brady and Nancy Sauer served as technical editors. Rodney Sauer formatted and produced the report. The affiliations of these individuals are given in the list of participants.

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Executive Director

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