Reviews of Current Publications

Some Recent Research in New Zealand Into Aspects of the Seismic Resistance of Prestressed Concrete Frames

R. Park and K. J. Thompson

This report summarizes recent research work completed by the authors, including: tests on beam-interior column joints; theoretical moment-curvature characteristics of prestressed and partially prestressed concrete sections subjected to monotonic flexure; moment-curvature characteristics of prestressed and partially prestressed concrete sections subject to cyclic flexure; and earthquake response of simple prestressed, partially prestressed, and reinforced concrete systems.

The studies give clear evidence that properly detailed prestressed concrete frames will give satisfactory seismic load resistance.

(*Bulletin,* New Zealand Society for Earthquake Engineering, P.O. Box 243, Wellington, New Zealand, V. 9, No. 3, Sept. 1976, pp. 167-174.)

Precast Veneer Replaced by All-Precast Structure

Thomas W. Taylor

Utilizing engineering solutions to architectural problems greatly enhanced the architectural appearance of the Citizens Bank Center Tower in Richardson, Texas. Long-span prestressed, lightweight concrete beams, post-tensioned to concrete columns, became the architectural facade of this building. Control of the beam deflection and camber was one of the major design considerations. Since the structural system was unique and it was necessary to control cost, the precast concrete work was bid before the rest of the trade to determine this cost item before proceeding.

(*Civil Engineering*—ASCE, April, 1977, pp. 80-83.)

Construction and Design of Cable-Stayed Bridges

Walter Podolny Jr. and John B. Scalzi

Provides up-to-date information on the art of design and construction methods for cable-stayed bridges. Covers all facets of technical design construction details and methods, and potential economies. Treatment is given to currently used, world-wide structural features such as geometrical configurations, the types and styles of towers, and materials used in roadway decks.

Illustrations of bridges from different countries are discussed and amplified by detailed sketches and photographs of the special features of each bridge. Includes discussions of the manufacturing and production processes of structural wires, ropes, and strand; methods for making the connections between cables and the deck and/or towers; the theory of cables and structures; methods of analysis; possible techniques and methods of fabrication and erection. Also includes a chapter on concrete superstructures. This book is part of a series on practical guides to construction.

(John Wiley and Sons, Inc., New York, 1976, 506 pp., $32.50)

Design of Seismic Resistant Prestressed Concrete Structures

A. L. Andrews

Discusses the reliability of using the results of research to predict the behavior of prestressed concrete frames subject to earthquake loads. The design of seismic resistant structures is discussed especially in relation to the recently introduced New Zealand Loading Code on design and construction.

(*Bulletin,* New Zealand Society for Earthquake Engineering, P.O. Box 243, Wellington, New Zealand, V. 9, No. 3, Sept. 1976, pp. 175-180.)