

4CCEE, Dept. Civil Engineering, University of British Columbia, 2075 Westbrook Mall, Vancouver, B.C., V6T 1W5.

Strengthening of Building Structures - Diagnosis & Therapy; September 29-30, 1983, Venice, Italy. Concerns structural aspects of renovation and upgrading of buildings and restoration of historical monuments. Objectives: recording symptoms of damage or deterioration, structural analysis of the damaged building and assessment of its safety after repair or strengthening, and practical techniques for repair and strengthening. Contact: Secretariat of the IABSE, CH-8093, Zurich, Switzerland.

U.S. AWARD TO PROF. PAULAY & DR. TAYLOR

The Board of Direction of a learned society in the United States, the American Concrete Institute, has selected Professor Thomas Paulay and Dr. Roy G. Taylor to receive the 1983 Raymond C. Reese Structural Research Award. This Prestigious award of the American Concrete Institute is normally made annually and is to the author or authors of a paper published by the Institute in the period subsequent to the last award that describes a notable achievement in research related to structural engineering and which indicates how the research can be used. Professor Paulay and Dr. Taylor have been invited to attend the annual convention of the A.C.I. at Los Angeles, California, in March 1983 where the presentation will be made.

The award paper is entitled "Slab Coupling of Earthquake-Resisting Shearwalls". It was published in 1981 in the Journal of the American Concrete Institute. It presents the results of a theoretical and experimental study of shear walls, generally used in multistorey buildings, which are interconnected at each floor by floor slabs only. In contrast to walls interconnected by relatively deep beams the models tested showed much greater flexibility and a more dramatic deterioration of stiffness and strength under earthquake simulating reversed cycling loading. The observations indicated that it is doubtful whether slab coupling could be used as the primary source of energy dissipation in ductile coupled shear walls during very large earthquakes.

Professor Paulay received the Raymond Reese Structural Research Award also in 1982.

Professor Paulay has previously received a number of New Zealand awards and was also a corecipient of the Gzowsky Gold Medal of the Canadian Institution of Engineers in 1975.

TECHNICAL NOTE

PRIORITIES FOR RESEARCH REQUIREMENTS
RELATED TO THE DESIGN OF
SEISMIC RESISTANT HIGHWAY BRIDGES

D N Jennings*

In the September 1982 Bulletin⁽¹⁾ the Research Recommendations developed at the December 1981 Wairakei Workshop on the Design of Seismic Resistant Highway Bridges were presented. At the time of publication the assessment of research priorities as found from the Applied Technology Council (ATC) postal survey of the Workshop participants was not available and these are now presented.

Priorities of the Research Recommendations:

The specific recommendations developed during the Wairakei Workshop (1) were edited and circulated to all participants for their comments and priority ratings. The highest priority was assigned a rating of 10 and was defined as an urgent research or development need that should receive immediate attention. Recommendations considered to be of medium priority were assigned a rating of 5; this priority level was defined as a desirable research or development need that should receive attention in the near future. The lowest priority was assigned a rating of 1 and was defined as a research or development need that would improve the state of knowledge but does not require immediate attention or near-term attention.

Thirty four of the 48 participants rated recommendations and the average of the ratings is given in Table 1. Each participant that rated the recommendations was classified in either the design or research area. The average rating for each recommendation is given in Table 1 with respect to the average of all 34 responses and to the average of the 18 and 16 participants in design and research areas, respectively.

It is recommended that the ratings be used with caution in that many of the specific recommendations are interrelated and research should not necessarily be confined to a specific recommendation. In many cases, comprehensive research programmes incorporating several of the recommendations, regardless of the individual ratings, is preferable to a series of smaller independent research programmes. The ratings are therefore presented as a guide to research priorities as it is believed that the range within which a particular rating falls is more important than its specific value.

* Technical Secretary, Road Research Unit Structures Committee, Wellington.

(1) Jennings, D.N., (1982) : "Research Requirements Related to the Design of Seismic Resistant Highway Bridges", Bulletin NZNSEE, Vol. 15, No. 3, September 1982.

TABLE 1
Average Ratings of Research Recommendations

Recommendation ⁽¹⁾	Average Rating of All Participants	Average Rating of Designers	Average Rating of Researchers
I.A.1	5.9	5.8	6.1
I.A.2	6.1	5.8	6.4
I.A.3	4.6	4.3	5.0
I.A.4	7.1	7.0	7.2
I.A.5	6.9	7.0	6.8
I.B.1	5.6	5.6	5.6
I.B.2	5.1	4.6	5.8
I.B.3	6.6	6.7	6.4
II.1	6.3	6.2	6.4
II.2	6.0	5.8	6.2
II.3	6.1	6.3	5.8
II.4	6.8	7.1	6.3
II.5	6.0	6.2	5.8
III.1	6.8	6.8	6.9
III.2	7.4	7.6	7.1
III.3	5.4	5.2	5.7
III.4	7.2	7.7	6.5
III.5	5.9	5.5	6.5
III.6	4.6	4.5	4.7
III.7	6.0	6.1	5.9
III.8	5.7	5.6	5.8
III.9	6.3	6.4	6.1
IV.1	4.9	4.9	4.8
IV.2	5.2	5.3	5.1
IV.3	6.5	6.9	6.0
IV.4	6.1	6.4	5.7
IV.5	6.3	6.5	6.0
IV.6	6.1	6.3	5.8
IV.7	4.8	4.6	5.0
IV.8	4.3	4.1	4.7
IV.9	7.7	7.6	7.9
V.1	7.5	7.0	8.0
V.2	7.0	6.8	7.2
V.3	6.7	6.5	6.9
V.4	6.4	6.8	6.0
V.5	7.3	7.0	7.6
VI.A.1	6.6	6.6	6.7
VI.A.2	5.3	5.7	4.8
VI.A.3	6.2	6.4	5.9
VI.B.1	5.8	6.8	4.6
VI.C.1	6.6	6.7	6.4
VI.C.2	6.4	6.4	6.3
VI.C.3	6.2	6.2	6.1
VI.C.4	6.0	7.2	4.4
VI.C.5	6.5	6.8	6.1
VI.D.1	8.7	8.7	8.7
VI.D.2	5.2	4.9	6.0
VI.D.3	6.4	6.7	5.7
VII.1	6.4	6.3	6.6
VII.2	6.4	6.8	5.7
VII.3	6.4	6.5	6.3
VII.4	5.5	5.4	5.7
VII.5	4.5	4.1	5.1
VII.6	4.4	4.1	4.8
VII.7	4.9	4.2	6.0
VII.8	6.2	5.9	6.6
VII.9	5.6	5.5	5.7
VII.10	7.1	6.7	7.7
VIII.1	7.3	6.4	8.5
VIII.2	8.6	8.2	9.9
VIII.3	7.6	7.2	8.2
VIII.4	5.1	4.4	6.0
VIII.5	4.7	4.4	5.0
VIII.6	6.9	6.6	7.4
VIII.7	5.4	5.0	6.0