

# Designers are exasperated

**D**esigners in California may be obliged to inform clients that complying with the state building code merely provides for collapse prevention in earthquakes. A bill to that effect under study by a state senate committee reflects exasperation about severe damage to retrofitted buildings in last year's Northridge quake.

"The structural engineering profession has brought upon itself a critical wound," said Paul F. Fratessa at a June 15-17 National Concrete and Masonry Engineering Conference in San Francisco. He is president of the National Council of Structural Engineer Associations and head of a firm bearing his name in Oakland, Calif. He also is chairman of the California Seismic Safety Commission, which will issue a statement on July 12 pointing out the seismic vulnerabilities in code-complying designs.

Current codes provide designers with wide leeway in crafting seismic retrofits, said Mohammad R. Ehsani, an associate professor of civil engineering at the University of Arizona, Tucson. He touted a new approach to retrofitting unreinforced masonry buildings (UMB) that involves covering walls with composite fabrics. Compared to the cost of applying shotcrete, "it's about a 40% savings," Ehsani said.

With 25,000 privately owned UMBs in the state, the difficulty of complying with a retrofit mandate is being handled with various degrees of success. San Francisco intends to make \$350 million in low-interest loans to finance life-safety retrofits of more than 2,000 UMBs. Los Angeles led the way in 1980 with a program involving 8,000 of the buildings, without such loans (ENR 7/4/94 p. 11). "There was massive demolition of buildings," said Kelly J. Hayden, project administrator of San Francisco's UMB loan program, speaking on June 13 to the local chapter of the American Institute of Architects. "The outcome wasn't one you would necessarily want to replicate."

Concerned about preserving low-income housing, San Francisco emphasizes social as much as seismic engineering. Under a 1993 state exemption, the city allows a lower level of retrofit than generally required. And the city requires that 25% of retrofit crews be economically disadvantaged residents (ENR 3/7/94 p. 12). "Obvi-



Masonry buildings are of increasing concern.

ously, these contracting requirements are not something the private sector is used to dealing with," Hayden said.

San Francisco already sees evidence of slipshod retrofit designs that fail to mirror site conditions. By the end of this month, the city's Dept. of Building Inspection intends to take up a proposal for plan checkers to visit sites before reviewing the designs. □

## PEOPLE

### BuRec chief is leaving after changing course

**A**fter two years of steering the Interior Dept.'s Bureau of Reclamation further away from dambuilding toward "water resource management," Daniel P. Beard has decided to step down as the agency's commissioner, effective Sept. 1.

Beard, 52, has not announced his plans. "I don't think he knows" what he will do next, says BuRec spokesman Paul Bledsoe. But he adds that Beard, a Washington state native, has talked