

# editor's note



**To hold the same views at forty as we held at twenty is to have been stupefied for a score of years, and take rank, not as a prophet, but as an unteachable brat, well birched and none the wiser.**

—Robert Louis Stevenson

The first disaster I wrote about for *Modern Steel Construction* was the Loma Prieta earthquake of 1989. Looking back on my coverage of that event (and the subsequent Northridge earthquake of 1994), I'm amazed at my impetuosity and how ready I was to jump to conclusions (and to put them down in print!). I still have the urge to jump to conclusions, but I hope I've learned to temper my feelings with patience. Given my impulsive nature, I'm especially impressed with many of the measured responses I've read in response to this latest disaster—the collapse of the Interstate 35W Bridge in Minneapolis.

While the usual suspects jumped in with sweeping generalizations (one well-known professor equated a truss bridge to a house of cards) and invariably wrong initial theories (I wish some media guru would compile some of these early comments and compare them with the studies that are always released about a year after events like this and then decide whether they still want comments from some of these self-serving experts), most of the engineering community showed remarkable wisdom in distilling a complex issue into understandable sound bites for the general public.

In the days immediately following the collapse, leading experts discussed how bridge design had changed in the 1960s and how engineers had developed more advanced analytical methods, thought they knew much more than their predecessors, and therefore designed for more precise loads and reduced redundancy. And many engineers further explained that today we use higher strength materials with better corrosion protection and increased redundancy. Here are some of my favorite quotes that actually help people understand what happened rather than simply satisfy the ego of the speaker:

From Joseph Yura, emeritus professor of civil engineering at the University of Texas: *The smaller amount of knowledge you have, the bigger the factor of safety you use.*

From Sue Lane, an engineer and manager at ASCE: *Redundancy is all about sharing. If four of us are moving a piano and one of us falls, maybe three will be able to hold it up. But not if there are only two carrying it.* And she added that today bridges are built with fewer joints, stronger steel, and greater redundancy.

Edward P. Wasserman, director of the structures division at the Tennessee Department of Transportation, explained that even fracture-critical bridges can be rehabilitated rather than replaced *as long as you put in place the proper design to virtually eliminate the risk of fracture and as long as you have a reasonable plan to inspect and maintain it.*

Caltrans director Will Kempton assured the public: *These things happen very rarely. There's no higher probability of this happening tomorrow than there was of it happening last month.*

And perhaps my favorite response of all came from David A. Fowler, a civil engineer at the University of Texas, during an online Q&A with *Washington Post* readers: *I can't answer that...it's far too early to be drawing any conclusions.*

My friend Richard G. Weingardt, a well respected structural engineer from Denver, has long stressed the need for the engineering community to get more involved in the public discourse—and at no time has this been more appropriate than now. Time after time, we've seen failures of our aging infrastructure. Yet funds for needed repair and maintenance are constantly withheld. I urge everyone to get involved with your local, state, and federal representatives and to stress the need for additional infrastructure funding. Insist that this be a priority of your local and national engineering associations. The readers of this magazine have the expertise; it's your responsibility to get involved.

**SCOTT MELNICK**  
EDITOR

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