# **MCI Researcher Places First**

Lisa Reiner, a student in the College of Engineering and Computer Science at the University of California-Northridge, placed first in the fifth annual Student Research and Creative Works Symposium for her work with MCIs. Her presentation was titled "Corrosion Inhibition of Steel Rebar in Concrete by Migrating Corrosion Inhibitors." She also represented CSUN at the CSU competition in May. Professor Behzad Bavarian served as her advisor. You can view the results of their study on MCI 2022 in our MCI manual, on the Cortec website, or on our MCI CD-ROM.

# **ASCE grades infrastructure**

The American Society of Civil Engineers released its infrastructure needs and performance report for 2001. For comparison, grades in each area from the 1998 report are cited. Each category was evaluated on the basis of condition and performance, capacity versus need, and funding versus need.

# *Key:* A=Exceptional; B=Good; C=Fair; D=Poor; F=Inadequate

# Roads: D+

One-third of the nation's major roads are in poor or mediocre condition, costing American drivers an estimated \$5.8 billion a year. Road conditions contribute to as many as 13,800 highway fatalities annually. Twentyseven percent of America's urban freeways, which account for 61 percent of all miles driven, are congested. [1998:D]

#### Bridges: C

As of 1998, 29 percent of the nation's bridges were structurally deficient or functionally obsolete, an improvement from 31 percent in 1996. It is estimated that the cost to eliminate all bridge deficiencies will be \$10.6 billion a year for 20 years. [1998: C]

#### **Aviation: D**

Airport capacity has increased only 1 percent in the last ten years, while air traffic has increased 37 percent. Airport congestion delayed nearly 50,000 flights in one month alone last year. Congestion also jeopardizes safety: 429 runway incursions ("near misses") were reported in 2000, up 25 percent from 1999. [1998: C-]

# Schools: D-

Since 1998, the total need has increased from \$112 billion to \$127 billion.

# **Drinking Water: D**

The nation's 54,000 drinking water systems face an annual shortfall of \$11 billion needed to replace facilities that are nearing the end of their useful life and to comply with federal water regulations. Nonpoint source pollution remains the most significant threat to water quality. [1998: D]

## Wastewater: D

The nation's 16,000 wastewater systems face enormous needs. Some sewer systems are 100 years old. Currently, there is a \$12 billion annual shortfall in funding for infrastructure needs in this category, while federal funding has remained flat for a decade. More than one-third of U.S. surface waters do not meet water quality standards. [1998: D+]

## Overall

• America's '01 infrastructure G.P.A.: D+ [1998: D]

• Total Investment Needs=\$1.3 Trillion (estimated 5-year need)

Following the report card's release, ASCE resumed its efforts with other construction-linked groups to promote passage of major legislation supporting water infrastructure. In testimony before the U.S. House Subcommittee on Water Resources and Environment, ASCE noted that Congress 1) needs to spend at least \$12 billion in fiscal year 2002 to upgrade wastewater treatment plans and aging sewer pipes around the nation, and 2) ought to approve funding of \$1 billion for drinking water systems, the maximum allowed by law in FY 2002.

"The President has proposed total funding of \$3.3 billion for critical [wastewater and drinking-water] programs, an amount that we believe is inadequate," notes ASCE's Larry Roth, assistant executive director and chief operating officer. "Over the next 20 years, America's water and wastewater systems will have to invest \$23 billion a year more than current investments just to meet the existing national environmental and public health priorities in the Clean Water Act and Safe Drinking Water Act and to replace aging and failing infrastructure."



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