

FAILING INFRASTRUCTURE — THREATENING OUR ECONOMY AND WAY OF LIFE

AUTHOR: Patrick J. Natale P.E. '70, MS '75 is executive director of the American Society of Civil Engineers (ASCE). He previously served as executive director of the National Society of Professional Engineers and held top-level management positions with the Public Service Electric and Gas Company (PSE&G) of New Jersey.



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A blackout in the Northeast, failure of the levees in New Orleans, a steam-pipe explosion in New York and a bridge collapse in Minneapolis are just a few recent examples of how vast and tragic the impact of our nation's failing infrastructure can be. Fixing the foundation our country was built upon — our infrastructure — is one of the greatest challenges we face. Our growing population is relying on an aging infrastructure, and not only are we inadequately repairing and replacing it, but we are also ineffectively planning for the future.

The American Society of Civil Engineers periodically issues a report card assessing the condition of our roads, water systems and other public works. As the experts entrusted with designing, building and maintaining America's infrastructure, we believe it is our obligation to inform the public about its condition. In ASCE's most recent *Report Card for America's Infrastructure*, 15 critical infrastructure categories received an overall grade of D. To raise that grade, ASCE is engaged in educating legislators, civil engineers and the general public about the need for leadership, increased funding and innovative solutions for the infrastructure systems that support daily life.

Leadership

Leadership isn't just about identifying problems. To be truly effective, leadership must be about championing solutions. The first step in ASCE's leadership plan — *Raising the Grade: Small Steps for Big Improvements in America's Failing Infrastructure* (www.infrastructurereportcard.org) — outlines specific measures Congress should implement to protect our infrastructure systems. And lawmakers are beginning to heed this call to action.

The National Infrastructure Improvement Act of 2007, passed by the Senate last August, calls for establishing a national commission on infrastructure. The commission would report to Congress by 2010 on issues such as: the capacity of infrastructure improvements to sustain current and anticipated economic development; the age, condition and capacity of our infrastructure; repair and maintenance needs; and potential financing methods and investment requirements.

However, despite infrastructure's vital importance to every person in this country, none of the contenders in the current

presidential election cycle has taken a leadership position on this issue. That must change.

Funding

ASCE estimates that the United States must invest \$1.6 trillion in federal, state and local funds over a five-year period to bring the nation's infrastructure to a condition that meets the needs of our current population. However, as much as half of the total investment needed is already allocated in existing budgets, and complementary funding methods — like user fees, public-private partnerships and tolling — will help us more quickly and effectively deal with our immediate infrastructure needs.

Innovative Solutions

Being innovative means looking for alternative, holistic solutions to our problems. It cannot just be about building more roadway miles; it must also be about increasing our use of mass transit. We can lessen our traffic woes if we encourage people to bike, carpool and support telecommuting, job sharing and alternate work schedules. We can find creative ways to build, repair and maintain structures so that they will be longer-lasting. We can develop and use innovative building materials that will improve the long-term performance of our infrastructure systems.

Crumbling infrastructure has an impact on us all, but who will rise to this challenge? Those of us in infrastructure-related professions have an obligation to help fix our nation's most precious and now fragile resource. But as users of the nation's roadways, drinking-water systems and airports, I assert that we all have a vested interest in seeing America's infrastructure GPA rise.

A crumbling infrastructure cannot support a healthy economy, so I urge you to join me in calling for national leadership on this vital issue. Our future well-being as individuals, and the well-being of our nation, depend on it. ■

Editorial Note: Current presidential candidates started to address the crucial challenges of rebuilding and improving the nation's infrastructure as this issue of NJIT Magazine went to press, clearly amplifying the urgency expressed by Patrick Natale.