

INVEST NOW!

Just as the national Report Card for America's Infrastructure discovered crumbling infrastructure, the Virginia Infrastructure Report Card shows many sectors that need our immediate attention. Virginia's infrastructure affects our quality of life, provides the framework for our state's economy, and protects the safety of our citizens. With a cumulative grade of D+, Virginia's aging infrastructure has a direct correlation to our prosperity in years to come. Investment now is essential to protect our way of life and the future for our children.

The purpose of the report card is not to paint a doomsday scenario, but to present a realistic picture of the condition of Virginia's infrastructure. The intent is to inform and help policy makers meet the challenges presented by an aging infrastructure and inadequate funding mechanisms. Maintaining and improving our infrastructure will preserve Virginia's status as one of the nation's most desirable states in which to live and do business.

5 KEY SOLUTIONS

The American Society of Civil Engineers developed Five Key Solutions which provide a strategy to address Virginia's infrastructure problems:

- Increase state leadership in addressing the issue of Virginia's infrastructure.
- Promote sustainability and resilience in infrastructure to protect the natural environment and withstand natural and man-made hazards.
- Implement statewide infrastructure plans, coordinated with regional and national infrastructure plans.
- Address the life-cycle costs and ongoing maintenance costs of infrastructure.
- Increase and improve infrastructure investment from federal, state, and local government levels as well as the private sector and direct users.

Founded in 1852, the American Society of Civil Engineers (ASCE) represents more than 147,000 members of the civil engineering profession worldwide and is America's oldest national engineering society. Virginia's Section was formed in 1922 and currently represents over 3,000 members around the Commonwealth.

ASCE is a 501(c)(3) tax-exempt educational organization dedicated to addressing civil engineering needs and this report card fulfills our latest efforts to educate Virginians about critical infrastructure needs around the Commonwealth.

CONTACT INFO

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Detailed reports for the 2009 National Infrastructure Report Card are available at:

www.infrastructurereportcard.org



www.ascevirginia.org

2009 VIRGINIA INFRASTRUCTURE REPORT CARD

VIRGINIA'S INFRASTRUCTURE REPORT CARD	
SUBJECT	GRADE
Aviation	C+
Bridges	C
Dams	D-
Drinking Water	C-
Energy	C-
Parks & Recreation	B-
Ports & Navigable Waterways	C+
Rail & Transit	C-
Roads	D-
Schools	D+
Solid Waste	C
Stormwater	D+
Wastewater	D+
GPA	D+

Virginia's infrastructure is aging, and in some cases, close to failing. At stake are issues affecting Virginia's quality of life, the safety of its citizens and its economic well-being. Using publicly available data, the Virginia Section of the American Society of Civil Engineers (ASCE) graded the condition of the state's infrastructure assets, identifying the need for critical improvements and funding. Grades were assigned in 13 primary category based on the reported condition of existing assets, expected service life, current functionality and level of service, future growth needs, and anticipated level of funding required to maintain current levels of service, safety and reliability. Full release available in January.

Aviation C+

Robust development undertaken over the past 10 years, including a new runway, terminal facilities and automated people movers at Reagan National and Dulles International airports in Northern Virginia, have helped meet increasing demands placed on the system. Crucial safety upgrades at individual airports, as recommended in the Virginia Air Transportation System Plan, are still needed.

Bridges C

Of Virginia's bridges and culverts, 26 percent are structurally deficient or functionally obsolete. In addition, more than 50 percent of the state's bridges are approaching the end of their anticipated service design lives, making Virginia's bridges among the oldest in the nation.

Dams D-

New state dam safety regulations enacted in 2008 will add approximately 1,400 dams to the existing inventory of 1,637 state-regulated dams. Dams not compliant with these regulations pose a potential hazard to 50,000 residents living in "dam break inundation zones." The cost to bring regulated dams into compliance with minimum safety regulations are estimated to be as much as \$220 million.

Drinking Water C-

Virginia's 2,944 regulated drinking water systems are becoming outdated, overused and subject to failure. In 2007, more than 880 Safe Drinking Water Act violations were issued, affecting 900,000 Virginians. An estimated \$6.1 billion is needed to replace transmission, storage and distribution facilities over the next 15 years. Water rates and fees are projected to increase by up to 80 percent to meet these needs.

Energy C-

Anticipated restrictions on coal-fired generating capacity will increase the strain on Virginia's energy supplies. By 2017, Virginia will need 2,950 megawatts of new capacity. To provide cost-effective energy to consumers, Virginia must make grid improvements. Investments in alternative energy sources are critical to sustaining future demands; otherwise, electrical power rates must increase between 50 and 70 percent over the next 10 years.

Parks and Recreation B-

In 2006, attendance at national and state parks exceeded 21 million people, resulting in more than \$420 million in tourism revenue and providing 6,100 jobs statewide. Tourism revenue is essential to the economy of rural Virginia where many parks are located. Based on population projections, an additional 12,000 acres of parkland will need to be acquired by 2010.

Ports and Navigable Waterways C+

Virginia's ports and navigable waterways are threatened by increasing traffic congestion and the state's inability to fund needed rail, road and inland infrastructure improvements. Virginia's ports sustain current economic activity of more than \$41.1 billion a year and employ more than 343,000 workers. To remain a major transportation hub of the eastern U.S., Virginia must continue to invest heavily in its ports.

Rail and Transit C-

Transit ridership in Virginia grew by 20 percent between 2002 and 2006, compared to a national growth rate of only 4 percent. This trend is expected to continue. Rail freight movement is expected to double by 2035. A sustainable source of funding for new or expanded rail and transit services is critical to Virginia's future economic success.

Roads D-

Increasing traffic congestion on Virginia roads is choking major urban areas and is having a negative impact on businesses, commuters and tourists. By 2025, capital and maintenance needs for transportation are expected to exceed \$203 billion, with roads requiring \$74 billion, revenues from current funding sources are only expected to be \$95 billion. If current trends continue by 2014, state highway funds will be insufficient to match federal funds, resulting in Virginia losing its share of federal funding.

Schools D+

With school enrollments expected to grow 7 percent by 2016, and over 46 percent of our schools over 40 years old, new schools and new class rooms are needed. At the same time, declining revenues from state and local governments make the current funding mechanism inadequate to sustain Virginia schools. Thousands of temporary trailer classrooms exacerbate the growing problem.

Solid Waste C

Virginia's solid waste facilities will be at capacity within the next 20 years. Closure costs for the nearly 200 at-capacity facilities are expected to exceed \$175,000 per acre, with new landfill construction costs projected at \$250,000 per acre. Landfill disposal fees are expected to double. Waste diversion plans reuse, recycling, and energy recover will be required to minimize the impacts of increased costs.

Stormwater D+

Stormwater flows into ditches, detention and retention basins, streams, rivers, and ultimately, the Chesapeake Bay. Recent changes in stormwater regulations have increased the need to construct, operate and maintain comprehensive water quality and flood control systems. The cost to maintain and replace is also increasing.

Wastewater D+

Discharge from Virginia's estimated 746 municipal wastewater treatment facilities is the second largest source of nitrogen pollution in the Chesapeake Bay—significantly contributing to the bay's 150-mile "dead zone" from Baltimore to the York River. By 2020, an estimated 45 percent of water and sewer pipes in Virginia will need major renovation or replacement, sustained funding and improved operations are needed.

VIRGINIA'S
INFRASTRUCTURE

GPA: D+

**INVEST NOW TO PRESERVE
VIRGINIA'S QUALITY OF LIFE**