TO RAISE THE GRADE

1. State lawmakers and their Rebuild Alabama program have improved surface transportation sectors. This progress should guide decision makers at every level of government to improve infrastructure funding.
2. Prioritize project planning and management techniques such as asset management, design-build project delivery, and life cycle costing to wisely implement projects and utilize funds throughout all infrastructure sectors.
3. Improve the resilience and sustainability of infrastructure and the safety and security of communities to prepare for the future.
4. Establish a dam safety program to inspect the condition of the state’s dams and create a revolving grant or loan program to rehabilitate and repair dams in need.

About the Grades

Infrastructure is graded based on eight criteria: capacity, condition, funding, future need, operation and maintenance, public safety, resilience, and innovation. ASCE grades the following scale and defines these grades as:

A - Exceptional, Fit for the Future
B - Good, Adequate for Now
C - Medical, Requires Attention
D - Poor, At Risk
E - Falling/Critical, Unfit for Purpose
F - Incomplete, Data is Insufficient to Provide a Grade
G - New

About ASCE - Alabama Section

Founded in 1931, the Alabama Section of ASCE represents over 1,600 practicing civil engineers and civil engineering students in Alabama. The Section is comprised of six branches, three young member groups, various committees, and six student chapters, serving the entire state by providing professional and technical opportunities to its members, the local community, and non-technical audiences. The Alabama Section of ASCE is committed to monitoring and coordinating programs best handled at a statewide level, all while promoting and protecting the civil engineering profession and serving the public good by bringing attention to infrastructure needs and opportunities for civil engineering students.

Civil engineers inherently understand the importance of infrastructure to the health of a state’s economy and its citizens. Our hope is to impress that same importance upon you.

How You Can Get Involved

1. Get the full story behind this Report Card at www.infrastructureresortcard.org/Alabama
2. Ask your elected leaders what they’re doing to keep up with your neighborhood’s infrastructure. Use your zip code to get your list of elected officials at www.infrastructureresortcard.org/take-action.

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Alabama's 80 publicly-owned airports have excess capacity for connecting people and goods to other local, regional, and global areas. In today's global economy, this connectivity is critical for Alabama's economic future. According to a 2020 condition inspection report, less than half of Alabama’s airports require multiple types of minor maintenance while only 17% have other condition-related needs such as lighting, marking, and/or pavement distresses. The 2020 Alabama statewide Airport System Plan (AL SASP), completed by the Alabama Department of Transportation, showed a system-wide, 10-year development need of $1.36 billion. However, at current funding levels, an annual funding deficit of $67.6 million exists. In order to maintain the state's 145 million square feet of pavement, promote economic impact, maintain public safety, and ensure that a network of airports remains available, the state's airport system needs appropriate funding to ensure conditions do not deteriorate.

Drinking Water

Alabama has no more than 1,000 bridges. Of these, 41.5% are rated in good condition, 15.5% are in fair condition, 23.6% are in poor condition, and 10.4% are in structurally deficient condition. The structural condition of these bridges is measured by the Alabama Department of Transportation (ALDOT) on a scale ranging from poor to excellent condition. The condition rating of a bridge is determined by the level of repair or rehabilitation needed to maintain the bridge's current capacity. In Alabama, the average age of a bridge is 48 years.

The water system in Alabama is responsible for delivering safe and reliable drinking water to millions of people. In Alabama, 95% of households have access to piped water systems, and the state has one of the highest water supply reliability rates in the nation. The Alabama Water Resources Board (AWRB) is responsible for ensuring that water supplies are adequate and that water resources are managed in a way that protects the environment and public health and safety. The AWRB regulates water use and protects groundwater resources. The Board is also responsible for regulating the construction of new water systems and ensuring that existing systems are safe and reliable.

Energy

Alabama is home to over 4.8 million people and roughly consume the same amount of energy it produces. There are over 6,000 miles of high (above 2300°F) and low (under 2300°F) pressure lines, and nearly 7,000 miles of oil pipeline across the state. Alabama ranks 14th in the nation in terms of energy expenditures per capita. In 2020, the state's primary energy source is natural gas, and more than 95% of the state's electricity is generated from natural gas. The state's electricity grid is managed by the Alabama Power Company, which is owned by the Southern Company.

Alabama's electrical grid is interconnected with the regional transmission system, and the state is connected to the larger Southern Co. grid, which provides backup power during times of high demand. The state has a diverse mix of generating technologies, including coal, natural gas, nuclear, and renewable energy sources. Alabama has a subtransmission grid, which is a network of transmission lines that deliver power from the distribution centers to the end users. The state's distribution grid is owned and operated by Alabama Power Company, and it is connected to the regional grid through a series of substations.

Inland Waterways

Alabama's inland waterways are made navigable with the use of 32 locks and dams across 5 different waterway systems. The waterways that lie within Alabama’s boundaries are the Tennessee-Tombigbee Waterway, the Mobile River, the Alabama River, the Coosa River, and the Black Warrior River. These waterways provide access to major markets and transportation routes, connecting Alabama to other states and the rest of the nation. The Alabama Waterways Commission is responsible for maintaining these waterways and ensuring their navigability.

Wastewater

Alabama's wastewater systems consist of both built and natural infrastructure. Built infrastructure includes collection systems, treatment plants, and disposal systems. Natural infrastructure includes wetlands, streams, and other natural features that help to manage and filter wastewater. The preservation and maintenance of both built and natural systems is essential for ensuring Alabama's social, environmental, and economic interests are addressed. Deficiencies in the state's wastewater infrastructure can result in public health and public health and safety risks. Complicating matters is the fact that Alabama communities lack stormwater system inventory and condition assessment data. This information is vital for communities to make informed decisions about system improvement and operation.

Alabama’s public transit systems serve a vital role in connecting the state’s residents to work, school, and other activities. In 2020, public transit provided approximately 6.8 million trips, or an estimated 86% were made in urban areas, consistent with the distribution of the state's population. Currently, more than 100 transit systems serve Alabama, providing access to more than 41 million people, or over 90% of the state's total population. The 2019 ridership numbers illustrate a growing demand for transit services in Alabama, indicating that the state's public transit systems are successful. It is also important to note that the state's public transit systems also play a critical role in reducing traffic congestion and providing reliable transportation options for those who may not have access to a car.

Alabama's public transit systems are facing challenges that may impact their ability to serve the state's residents. These challenges include funding shortages that do not adequately provide for services to meet the demands. While it is estimated that Alabama could receive $400 million in federal transit funding over the next decade, only a small portion of this funding is allocated to the state's public transit systems. Funding shortages also contribute to the state's public transit systems' ability to meet the needs of the state's residents.

Alabama's water system is a vital resource that provides drinking water to millions of people in the state. The state's water system is managed by the Alabama Water Resources Board (AWRB), and the AWRB is responsible for ensuring that the state's water resources are managed in a way that protects the environment and public health and safety. The AWRB regulates water use and protects groundwater resources. The Board is also responsible for regulating the construction of new water systems and ensuring that existing systems are safe and reliable.

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