SOLUTIONS TO RAISE THE GRADE

1. Wisconsin must increase overall investment across all infrastructure sectors to ensure safe, resilient, and reliable systems to maintain and improve the quality of life and economic health for the state’s residents.

2. Leadership at the state and federal levels must have targeted discussions and build consensus to facilitate necessary updates for outdated infrastructure based on the needs of Wisconsinites.

3. Along with increased investments, efficiencies and new technologies can help bridge the gap in infrastructure needs, encourage new methods of design and construction, and defray costs while providing for a better future for Wisconsin.

4. Project priorities and investments should be based on asset management tools.

ABOUT ASCE WISCONSIN

The American Society of Civil Engineers (ASCE) is America’s largest and oldest national engineering society. In Wisconsin, ASCE has over 2,000 members that work in all levels of government, academic, and the private sector to design, construct, and maintain Wisconsin’s infrastructure. We uphold the vision of civil engineers as active community members and stewards of our infrastructure. We bring value to our members by providing technical and informative meetings that promote professional development. In addition to scholarships, mentorship, and K-12 education, our outreach programs offer networking opportunities for students and professionals throughout the state.

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INFRASTRUCTURE MATTERS

Access to reliable, safe infrastructure improves the quality of life and ‘sets the table’ for sustainable economic growth. As an example, tourism in Wisconsin has grown substantially from 2014 to 2019. Business and recreational travelers, both domestic and international, spent $1.3 billion in 2018 and generated $20.0 billion in taxes paid to federal, state and local governments. This revenue helps fund jobs and public programs such as police, firefighters, teachers, road projects, and convention centers (The US Travel Association, 2018 Data). Tourism requires clean surface water to support recreation, fish habitat and outdoor wild life. Safe roadways, efficient air travel, and recreation trails all support and help promote tourism. Lodging and food service are essential which require cost effective sanitary sewer systems and a safe water supply.

Positive economic growth hinges on the availability and capacity of underlying systems that must support it, namely our infrastructure. Clean water (surface and drinking water), roads, bridges, transit systems, airports, water and sewer systems, dams, ports, and energy systems are categories of infrastructure that directly affect our ability to live, work, play and produce economic expansion and development. Infrastructure provides the foundation of our state’s economy and is integral to preserving our high quality of life.

Much of Wisconsin’s infrastructure requires capacity or maintenance upgrades or is reaching the end of its expected lifespan. You will see this reflected in Wisconsin’s grades. The energy grid, transportation systems, sewers, and drinking water systems of decades ago need upgrading to better prepare for security threats, larger storm events, increased use of renewable fuels, and a changing population.

The 2020 ASCE Wisconsin Report Card is a tool created to help residents, businesses, and policymakers understand the state of Wisconsin’s infrastructure. The information helps start the conversation about how to improve the future of our infrastructure.

HOW YOU CAN GET INVOLVED

• Get the full story behind this Report Card at www.infrastructurereportcard.org/Wisconsin
• Find out the condition of the infrastructure near you on the Save America’s Infrastructure app available on iTunes and GooglePlay.
• Ask your elected leaders what they’re doing to make sure your infrastructure is reliable for the future. Use your zip code to find your list of elected officials at www.infrastructurereportcard.org/take-action
AVIATION

Aviation is an integral part of Wisconsin’s transportation system, moving people and goods throughout the state, nation, and world. The state has eight commercial airports and 90 general aviation airports. In 2017, 1,120,000 passengers were transported over interstate and 5.5 million passengers to and from Wisconsin. The state’s largest commercial airport, Milwaukee Mitchell International, ranked 52nd in the nation in total passengers. In 2018, Wisconsin’s aviation industry saw an increase in commercial service airports and increased traffic in towered airports, but a slight decrease in freight traffic. In general, the condition of commercial aviation airports meets federal standards and capacity is sufficient. However, the amount of percent of airport pavement on primary runways and taxiways are rated as fair or below. However, general aviation airports need investments to meet future needs. The National Agriculture Marketing Improvement Plan, Wisconsin airports have identified a need of $317 million to replace runways and taxiways. The federal government needs to be able to finance a portion of their projects, find new revenue options, and utilize reliable, robust federal funding to meet future needs.

Inland Waterways

Inland waterways consist of the navigation channels and associated structures that support commercial transport of materials to and from ports, terminals, or other locations. The major inland waterway in Wisconsin is the Mississippi River, consisting of 305 miles of navigation channels. In 2017, 235 million tons of cargo were transported over barges on this freight highway, consisting primarily of agricultural products. Food product imports and exports, and unscheduled maintenance has contributed to decreased system performance. One component of this system, the profile adjustment mechanism component has kept the locks and dams functional for the past 150 years. Due to increased volume, efficiency, and reduced maintenance, an increased investment in waterway infrastructure will be necessary to access and reliable waterway supply for future generations.

BREEDS

Wisconsin’s 14,275 bridges provide the state with critical infrastructure connecting residents with their jobs, schools, businesses, and other activities. Wisconsin’s bridges are considered structurally deficient. While the bridge safety rating was better than the national average, we still have more than one million vehicles crossing the state’s bridges structurally deficient. That amount essentially remained the same for the last eight years. A 2019 report by the American Road and Transportation Builders Association found that Wisconsin is the 13th state in Wisconsin that require repair, with an estimated price tag of $1.4 billion. The report found that the failure to repair and maintain bridges increases the value of money decreases. Developing policy solutions and alternative project delivery methods, as well as utilizing innovative bridge construction and repair to help achieve cost savings are all crucial steps. Finally, the state should take action to create a major asset management system to increase bridge preservation efforts.

ENERGY

Wisconsin utilities provide energy to commercial, industrial, and residential ratepayers throughout the state. The mix of electrical power produced in Wisconsin has evolved with new gas-fired plants, wind power, and utility scale solar power compensating for the retirement of coal-fired plants. In general, Wisconsin’s energy needs are expected to grow by 37% through 2054. Energy shortages in Wisconsin and the current average retail electricity rate was 10.5 cents per KWH, higher than the Midwest and national averages per kWh. Wisconsin needs to focus on funding and investment needed capital projects for generation, distribution, and transmission. Through increased investment in infrastructure, we can develop consensus greenhouse gas emission goals and the required infrastructure to obtain them. Plans for power generation must continue to demand as well as public concern for the environment.

ROADS

Wisconsin encompasses more than 115,000 miles of drivable roads. More than one-third of these roads are in fair or poor condition. The state’s pavements are aged over 40 years. If additional funding is not provided, 50 percent of the roads will need repair within the next 10 years if additional funds are not provided. More than two-thirds of major roads, concentrated in urban areas, were rated as fair or below in roadway condition. Deficient roads cost drivers $6 billion annually due to wear and tear on vehicles, wasted fuel due to congestion, and the overall cost of roads below an acceptable standard. More than 46% of the roads in Wisconsin are classified as rural roads. The roads in Wisconsin are likely a contributing factor in approximately one-third of fatal traffic crashes. This is tremendous harm to the state and the individuals who use the roads.

WASTEWATER

Wisconsin’s municipal wastewater utilities are facing challenges due to aging infrastructure, growth, and new wastewater discharge requirements. The state’s wastewater infrastructure maintenance and upgrades are for Wisconsin total $6.3 billion. Utilities are raising rates to cover necessary costs and to combat dwindling grant funding. In Wisconsin, the average annual rate increase of nearly five percent is higher than the national average. However, the true cost of service is often still not reflective of rate increases. The highest rate increases occur in small rural communities of 1,000 or 5,000 residents. Meanwhile, approximately 23 percent of Wisconsin residents do not have access to sanitary sewers, mainly rural areas that are not connected to the public wastewater system. The wastewater utilities face significant capital costs to meet new phosphorus limits and other federal pollution control requirements. For previously undiscovered compounds like Per- and Polyfluorinated Substances, the cost of upgrading existing wastewater treatment facilities and ratepayers.