Exceptional,
Fit for the
safety, resilience and innovation. ASCE defines these grades as follows:

- **A**: Adequate
- **B**: Requires Attention
- **C**: At Risk
- **D**: Unfit for Purpose
- **F**: Fail/ Critical, Unfit for Purpose

The 2018 ASCE Report Card for Pennsylvania's Infrastructure is a simple tool used to help residents, businesses, and policymakers understand the state of Pennsylvania’s infrastructure. This information helps start the conversation about how to improve our infrastructure.

**Infrastructure Matters**

Most of use take infrastructure for granted in our daily lives—whether it’s an easy commute across roads and bridges, clean drinking water and streams, or reliable energy to power our electronics. Infrastructure also moves our economy, taking goods from ports to roads to store shelves and moving workers from their homes to their workplace. While we may not think about infrastructure every day, Pennsylvania’s civil engineers do because they’ve pledged to build it, maintain it, and keep the public safe.

Today, much of Pennsylvania’s infrastructure is old and outdated. Pennsylvania has some of the first infrastructure systems in the nation, and as a result, some of the oldest systems in the country. We’re now faced with frequent water main breaks due to our old pipes, the greatest amount of combined sewer overflows in the nation and a lack of easily accessible information relating to our stormwater assets.

The 2018 ASCE Report Card for Pennsylvania’s Infrastructure is a simple tool used to help residents, businesses, and policymakers understand the state of Pennsylvania’s infrastructure. This information helps start the conversation about how to improve our infrastructure.

**How You Can Get Involved**

2. Find out the condition of the infrastructure near you on the Save America’s Infrastructure app available on the Apple App store and GooglePlay.
3. 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.

**About ASCE-PENNSYLVANIA**

The American Society of Civil Engineers (ASCE) is America’s largest and oldest national engineering society. In Pennsylvania, ASCE has four active Sections: Central Pennsylvania, Lehigh Valley, Philadelphia and Pittsburgh, with nearly 6,000 members. By developing leadership, advancing technology, promoting the value of civil engineering, and advocating lifelong learning; ASCE enables its members, partners, and the public to improve our infrastructure and build a better quality of life.

**CONTACT US**

reportcard@asce.org  www.pareportcard.org
infrastructurereportcard.org/pennsylvania

**Continuing the Investment in Transportation**

Act 89 (signed in 2013) provided meaningful funding for multiple modes of transportation infrastructure. However, our needs are enormous and a one-size-fits-all approach to providing funding does not work anymore. ASCE encourages the Commonwealth to expand upon the Act 89 provisions empowering revenue collection at the county level and to consider a regional basis for revenue collection.

**Focus on Water**

Drinking water, wastewater and stormwater grades were some of the lowest in the 2018 Report Card, yet are critical to protecting our public health and safety. Building, repairing and updating water infrastructure will require leadership to plan to tackle new developments and improve upon existing conditions. We should encourage and support the passage of legislation that allows localities to reflect the true cost of treating, delivering, and managing water in their user fees.

**Preparing for the Future**

With a significant backlog of infrastructure needs, we need to push forward new ways to approach existing problems, such as public private partnerships (P3s) to pay for additional highway lanes or using connected and autonomous vehicles to increase capacity. Lawmakers should provide funding for research, development and deployment; engineers should continue to ensure the safety of the traveling public; and private industry should have a seat at the table as decision makers explore the ramifications of new technology.
Pennsylvania’s infrastructure faces challenges:

**ECONOMY**

Pennsylvania’s drinking water infrastructure is aging. In Philadelphia, half of the city’s water mains were installed prior to 1900. Cast iron, which makes up a majority of Pennsylvania’s water mains, saw its share of leakage rates near 10% in 2010. However, by 2019, that rate had increased to 20%. Meanwhile, 10% of Pennsylvania’s bridges are considered to be in poor condition. While bridges are a major part of the state’s infrastructure, they are also aging. In Philadelphia, half of the city’s bridges are at least 60 years old. This is a cause for concern as bridges that are not properly maintained can pose a risk to both drivers and pedestrians. Additionally, the state’s transmission and distribution systems are also in need of repair. In Philadelphia, the city’s transmission and distribution systems have seen a 20% increase in the number of customers served over the past five years. This increase in demand has put a strain on the existing infrastructure, leading to increased costs for both the city and its customers. The Pennsylvania Department of Transportation (PennDOT) has recognized this issue and is working to address it through the implementation of new technologies and the use of innovative funding methods. However, the state still faces challenges in ensuring that all of its infrastructure is up to date and functioning properly. The aging infrastructure, combined with the increasing demand for services, presents a significant challenge to the state’s economy and its residents.

**ENERGY**

Pennsylvania’s energy sector is poised for growth. The state has a diverse energy mix, with natural gas, coal, and nuclear power all playing important roles. The state’s natural gas resources are a major draw for investors, with Marcellus Shale gas operations generating significant revenue. However, the state’s energy sector faces challenges, including a need for new transmission infrastructure to meet growing demand and the challenge of maintaining reliable and affordable energy supplies for all residents. The state’s energy sector also faces challenges related to climate change, with increasing concerns about the impact of greenhouse gas emissions on the environment. Despite these challenges, Pennsylvania remains a leader in the development of clean energy technologies, and the state continues to invest in renewable energy sources. The state’s energy sector is poised for growth, with opportunities for new investment and the development of innovative solutions to address the challenges facing the industry.

**BRIDGES**

Pennsylvania’s bridges are deteriorating. The state has more than 22,000 bridges, and over 5,000 are considered to be in poor condition. In Philadelphia, nearly half of the city’s bridges are in need of repair or replacement. The state has allocated $1.5 billion over the next five years to improve its bridge infrastructure, but this is expected to be insufficient to address the need. The state has also implemented a program to develop a bridge management system to help prioritize the repair and replacement of bridges. Despite these efforts, the state continues to face challenges in ensuring that its bridge infrastructure is up to date and functioning properly.

**DAMS**

Pennsylvania has 3,380 state-regulated dams in the state that provide for the drinking water infrastructure. These dams are aging, with 25% of the state’s dams being more than 50 years old. The dams are also located in areas that are vulnerable to flooding, with 40% of the state’s dams being located in areas that are prone to flood. The state has allocated $1.5 billion over the next five years to improve its dam infrastructure, but this is expected to be insufficient to address the need. The state has also implemented a program to develop a dam management system to help prioritize the repair and replacement of dams. Despite these efforts, the state continues to face challenges in ensuring that its dam infrastructure is up to date and functioning properly.

**HAZARDOUS WASTE**

Pennsylvania has made notable progress in reducing the amount of EPA-regulated hazardous waste generated and in cleaning up and redeveloping abandoned contaminated sites. From 2005 to 2015, the amount of hazardous waste generated in the Commonwealth was the lowest in nearly a decade, and the state has made significant progress in cleaning up abandoned contaminated sites. However, there is still work to be done, and the state continues to face challenges in ensuring that its hazardous waste infrastructure is up to date and functioning properly.

**SEDIMENT**

The Point of Pittsburgh's Inner Waterways Navigation System consists of 17 locks and demands major repairs every 20 years in Pittsburgh. Much of the infrastructure is at least 70 to 80 years old. Extended age and lack of consistent funding have allowed the condition of the system to deteriorate to the point that watercraft lobbies have become politically active. Reducing sediment from both tributaries and dams along the Allegheny and Monongahela Rivers. An increasing number of funding for improvements in the navigation system is expected to provide for the long-term sustainability of the system. However, the funding is insufficient to address the needs of the infrastructure.

**PORTS**

In 2013, Act 89 provided significant improvement funding increases, resulting in 2,600 projects that are currently in progress or have been completed. However, these funds have contributed to the advancement of reconstruction rehabilitation, new roadway, and intersection improvement projects, there is a significant roadway backlog that still requires attention. As of 2013, 45% of Port of ODOT-owned roadway having a fair to poor pavement surface is the Port of ODOT-owned roadway having a fair to poor pavement surface. The Port of ODOT-owned roadway having a fair to poor pavement surface is $3 billion in today's lost time and wasted fuel, and deficient roadway conditions cost the average motorist over $1,250 per year in lost time and wasted fuel. The Port of ODOT-owned roadway having a fair to poor pavement surface is $3 billion in today's lost time and wasted fuel. The Port of ODOT-owned roadway having a fair to poor pavement surface is $3 billion in today's lost time and wasted fuel. As roadway conditions cost the average motorist over $1,250 per year in lost time and wasted fuel, the Port of ODOT-owned roadway having a fair to poor pavement surface is $3 billion in today's lost time and wasted fuel.

**STORMWATER**

Pennsylvania’s stormwater system management issues range from illegal discharge to illicit discharges. The state has implemented a program to develop a stormwater management system to help prioritize the repair and replacement of stormwater infrastructure. Despite this, the state continues to face challenges in ensuring that its stormwater infrastructure is up to date and functioning properly.

**TRANSPORTATION**

Pennsylvania’s transportation infrastructure is aging, with much of the state’s roadways and bridges having reached the end of their useful life. The state has allocated $1.5 billion over the next five years to improve its transportation infrastructure, but this is expected to be insufficient to address the need. The state has also implemented a program to develop a transportation management system to help prioritize the repair and replacement of transportation infrastructure. Despite these efforts, the state continues to face challenges in ensuring that its transportation infrastructure is up to date and functioning properly.

**WASTEWATER**

Pennsylvania’s wastewater infrastructure is aging, with much of the state’s wastewater infrastructure having reached the end of its useful life. The state has allocated $1.5 billion over the next five years to improve its wastewater infrastructure, but this is expected to be insufficient to address the need. The state has also implemented a program to develop a wastewater management system to help prioritize the repair and replacement of wastewater infrastructure. Despite these efforts, the state continues to face challenges in ensuring that its wastewater infrastructure is up to date and functioning properly.

**SCHOOLS**

Pennsylvania’s K-12 public school buildings are in need of extensive repairs and maintenance. Many schools in the state have reported that they are struggling to keep up with basic maintenance needs. The state has allocated $1.5 billion over the next five years to improve its school infrastructure, but this is expected to be insufficient to address the need. The state has also implemented a program to develop a school management system to help prioritize the repair and replacement of school infrastructure. Despite these efforts, the state continues to face challenges in ensuring that its school infrastructure is up to date and functioning properly.

Despite these challenges, Pennsylvania continues to work towards improving its infrastructure. The state has allocated significant funding to support projects that will help address the need for repair and replacement of aging infrastructure. While there is still work to be done, the state is taking steps to ensure that its infrastructure is up to date and functioning properly.

**WATERFRONT**

Pennsylvania’s waterfront infrastructure is aging, with much of the state’s waterfront infrastructure having reached the end of its useful life. The state has allocated $1.5 billion over the next five years to improve its waterfront infrastructure, but this is expected to be insufficient to address the need. The state has also implemented a program to develop a waterfront management system to help prioritize the repair and replacement of waterfront infrastructure. Despite these efforts, the state continues to face challenges in ensuring that its waterfront infrastructure is up to date and functioning properly.