

CONNECTICUT GRADES SUMMARY

G.P.A.



Bridges



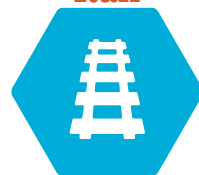
C

Drinking Water



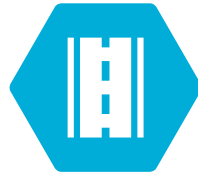
C

Rail



B

Roads



D+

Wastewater



C-

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 on the following scale and defines these grades as:



**Exceptional,
Fit for the
Future**



**Good,
Adequate
for Now**



**Mediocre,
Requires
Attention**



**Poor,
At Risk**



**Failing/Critical,
Unfit for Purpose**

TO RAISE THE GRADE

Connecticut needs to rehabilitate, modernize, and fund necessary improvements in our built environment to bolster the economy and improve quality of life. The Connecticut Society of Civil Engineers (CSCE) has ideas to to raise the grades:

1

INCREASE INVESTMENT

Connecticut has a substantial and widening gap between its long-term infrastructure investment objectives and expected revenues to fund these needs. This threatens the state's economic strength, business climate, and quality of life. Connecticut's funding gap faces additional pressures due to the suspension of the state gas tax and 40-year high levels of inflation, reducing the benefit of additional revenues from the Infrastructure Investment and Jobs Act.

If Connecticut is serious about meeting its future infrastructure funding needs, it is critical that elected leaders change course and assemble the political will to develop additional revenue sources within the state. Increased revenue is needed to pay for required maintenance, rehabilitation, and capacity improvements to our infrastructure.

2

IMPROVE RESILIENCE

As a coastal state, Connecticut's infrastructure is increasingly vulnerable to the impacts of climate change. Rising sea levels, increasing rainfall intensities and precipitation rates, combined with the extreme summer droughts, all pose challenges to the State's infrastructure systems. Wastewater and drinking water systems – as well as roads, bridges, and railroads – must be resilient and able to maintain operations during increasingly severe storms. That anti-fragility allows emergency response and a return to regular order as efficiently as possible.

Connecticut must double down on recent momentum toward this end. Projects here must meet recent regulations requiring back-up power to water systems, emergency contingency plans, vulnerability assessments, as well as physical upgrades.

3

LABOR RECRUITMENT

Current labor shortfalls are impacting Connecticut's public agencies, engineering firms, and contractors that are involved in maintaining, rehabilitating and building our infrastructure. These labor shortages pose severe challenges to infrastructure projects and capital programs throughout the State.

Connecticut leaders must come together to:

- Create and promote workforce development programs to increase the number of students pursuing engineering degrees.
- Expand intentional, proactive, and continuing efforts, such as apprenticeship programs, to recruit workers to the building trades.
- Develop outreach programs in our schools, to promote careers in engineering and construction trades.

About ASCE - Connecticut Section

The Connecticut Society of Civil Engineers is a professional society dating back to 1884. We are the local branch of the American Society of Civil Engineers. Members are civil engineers working in many different capacities, including designers, contractors, facility managers, town and state engineers, and in many different disciplines, including structural, geotechnical, hydraulic, environmental, survey engineering. We all share a common passion for designing, building and maintaining the structures and systems that allow our society to function. At monthly meetings we discuss topics that cover the gamut of civil engineering. We host day-long seminars to allow members to learn new methods and industry trends. We support the student chapters at the civil engineering schools in the state. We close out our year's activities by honoring the individuals who have distinguished themselves in their profession and firms who have completed projects that have enhanced our state and advanced our profession.

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

REPORT CARD FOR
CONNECTICUT'S
INFRASTRUCTURE

2022

INFRASTRUCTURE MATTERS

Pearl Harbor Memorial Bridge, New Haven, CT
Photo Credit: Connecticut Department of Transportation / H.W. Lochner

The people of Connecticut are concerned about the State's economy. Residents and elected leaders seek a business-friendly environment and improvements to their quality of life. Infrastructure is vital for our society's economic health – a cornerstone that is especially important to a densely populated state such as Connecticut. Infrastructure includes surface transportation networks such as bridges, streets for motorists, bicyclists, and pedestrians, and railroads carrying freight and passengers. Infrastructure also includes water systems: sourcing, treating, and sending clean water to the tap, plus wastewater collection and treatment facilities. Infrastructure is the backbone of our modern communities. Investments in our physical capital leads to increased opportunities for economic prosperity and helps improve the quality of life for residents.

The Connecticut Society of Civil Engineers, in conjunction with the American Society of Civil Engineers, has evaluated five infrastructure networks important to the State of Connecticut – roads, bridges, rail transportation, drinking water, and wastewater systems. Grades ranged from a D+ for roads to a B for rail, with an overall grade of C. Three out of five categories – bridges, drinking water, and wastewater, showed incremental improvement in their grades over the last four years since the first Connecticut Infrastructure Report Card was issued in 2018. No categories had their grades go down. The age of our infrastructure is a challenge across the categories. Connecticut has some of the oldest infrastructure in the country, much of it over 50 years old and beyond its intended life. While some conditional improvements have been made in recent years, there remains a significant long-term funding gap between predicted funding and needed investment. This gap puts any progress at risk.

The recent passage of the federal Infrastructure Investment and Jobs Act (IIJA) is expected to provide Connecticut with over \$5 billion in infrastructure funding over the next five years, which will help address some of the age, capacity, and condition challenges. However, inflation levels at 40-year highs and Connecticut's gas tax suspension through November 30, 2022 present headwinds. Capital improvement projects out for bid today are coming in higher and gas tax receipts have been reduced. Connecticut's civil engineers are working hard to do more with recent public investment, but it remains vital that Connecticut's leaders back a bold vision for our infrastructure to foster opportunities that improve our economy and increase prosperity for residents.

The 2022 Connecticut Infrastructure Report Card looks at the following five categories of infrastructure in the State, highlighting concerns and challenges while offering several proposed solutions: Bridges, Drinking Water, Rail, Roads, and Wastewater.

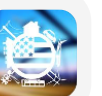
How You Can Get Involved

1

Get the full story behind this Report Card at www.infrastructurereportcard.org/connecticut.

2

Find out about the infrastructure near you on the Save America's Infrastructure app available on iTunes and GooglePlay.



3

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.infrastructurereportcard.org/take-action.

2022 REPORT CARD FOR CONNECTICUT'S INFRASTRUCTURE

The 2022 Report Card on Connecticut's Infrastructure gave the state an overall g.p.a. of C. Connecticut's civil engineers studied five infrastructure categories. Of those five, one infrastructure category is in good condition, three in mediocre condition, and one category is in poor condition.

The good news is there are solutions to all these challenges, and we can raise the grades of Connecticut's infrastructure. By learning more today about the conditions of the infrastructure you use every day, you too can help raise the grade.

BRIDGES



Consistent funding, a preventative maintenance focus, and further adoption of innovative materials and techniques have all contributed to a marked improvement in Connecticut's bridge infrastructure condition since the previous 2018 Report Card. The percentage of National Highway System bridges in Connecticut that are in poor condition is now in compliance with the Federal Highway Administration's 10% threshold since its reduction from 13% to 7.5% (measured by deck area). Connecticut's improvement on this statistic has outpaced its New England peers. However, across the board improvements have generally been limited to state maintained bridges; conditions of locally maintained bridges (which account for about 25% of the bridges in the state) are lagging. The overall outlook is positive, and additional federal funding from recent legislation will be leveraged to keep up the momentum. Still, the foreseeable future includes challenges that may slow or reverse system-wide improvement. There is a substantial funding gap that is delaying enhancements and reconstructions for several major bridges. These delayed projects are critical to the state's economic vitality.

DRINKING WATER



Connecticut residents benefit from high quality sources of drinking water supply. Over 97% of the population is served drinking water that meets all applicable health standards, well above the national target of 92%. However, systems are aging and in need of repair, rehabilitation, and maintenance, estimated to cost more than \$4 billion over the next 20 years. Leaking water mains contribute to losses estimated between 15 to 20% of total water production. To proactively ensure smart planning decisions about the future of Connecticut's drinking water, the state formally adopted a State Water Plan in 2019. Asset management planning will be required to ensure the limited available funding is used expeditiously.

RAIL



Connecticut's passenger rail system is both intrastate and interstate, although interstate passenger rail dominates. The Connecticut rail system is connected to the New York-centric Metro-North Railroad (MNR), the most active passenger rail system in the nation. In the past five years, Connecticut Department of Transportation and Amtrak have upgraded facilities, improved safety, and invested in major infrastructure replacement/rehabilitation projects. However, rail cars older than recommended and bridges in fair (55% of the total) or poor condition (27%) threaten capacity and increase costs. Greater state and federal investment is needed to increase the frequency, reliability, and coverage area to ultimately sustain the rail system with high ridership.

CONTACT US

800-548-ASCE (2723)
reportcard@asce.org
www.infrastructurereportcard.org/connecticut



Gold Star Memorial Bridge, New London – Groton, Connecticut
Photo Credit: Cardinal Engineering Associates

ROADS



There are 21,430 miles of roadways in the state of Connecticut. 19% of which are owned and maintained by the Connecticut Department of Transportation (CTDOT) and the remaining 81% by municipalities, of which 77% of local miles are in poor riding condition. Connecticut struggles with roadway congestion, containing six of the top 15 national freight bottlenecks. The state has not raised its gas tax since 2001, a funding stream that has lost 50% of its value to inflation and vehicle efficiency. Connecticut faces further revenue declines resulting from the gas tax suspension from April 1 through November 30, 2022 to combat increasing fuel prices. CTDOT has adopted transportation asset management and completed a state-wide climate resilience assessment, but the state's roads carry more vehicles than before COVID-19. Traffic safety has become a priority statewide with traffic deaths persisting and rural roads lacking sidewalks or bike lanes, posing an outsized danger.

WASTE WATER



Connecticut wastewater is treated by sanitary sewer systems and onsite septic systems. Septic systems service approximately 45% of residents. There are 94 permitted, domestic wastewater treatment plants. Connecticut residents paid an average of \$520 annually for sewer services in 2019, with increases outpacing national averages, but lagging the need of the Constitution State's very old infrastructure. To meet those needs, increased funding levels from the federal and state government must continue past the end of recent federal legislation. Like the infrastructure they maintain, Connecticut's wastewater engineers are aging, and successful services depend on more significant workforce development efforts from all stakeholders.

WWW.INFRASTRUCTUREREPORTCARD.ORG/CONNECTICUT