New York Transportation by the Numbers

MEETING THE STATE'S NEED FOR SAFE, SMOOTH AND EFFICIENT MOBILITY

NOVEMBER 2018

TRIP
a national transportation research group

TRIPNET.ORG

Founded in 1971, TRIP ® of Washington, DC, is a nonprofit organization that researches, evaluates and distributes economic and technical data on surface transportation issues. TRIP is sponsored by insurance companies, equipment manufacturers, distributors and suppliers; businesses involved in highway and transit engineering and construction; labor unions; and organizations concerned with efficient and safe surface transportation.

NEW YORK KEY TRANSPORTATION FACTS

THE HIDDEN COSTS OF DEFICIENT ROADS

Driving on New York roads that are deteriorated, congested and that lack some desirable safety features costs New York drivers a total of $24.8 billion each year. TRIP has calculated the cost to the average motorist in the state's largest urban areas in the form of additional vehicle operating costs (VOC) as a result of driving on rough roads, the cost of lost time and wasted fuel due to congestion, and the financial cost of traffic crashes. In addition to the statewide report, TRIP has produced customized regional reports for the Albany-Schenectady-Troy, Binghamton, Buffalo-Niagara Falls, New York-Newark-Jersey City, Poughkeepsie-Newburgh-Middletown, Rochester, Syracuse and Utica areas.

Location	VOC	Safety	Congestion	TOTAL
Albany-Schenectady-Troy	$351	$506	$1,006	$1,863
Binghamton	$417	$591	$388	$1,396
Buffalo - Niagara Falls	$382	$412	$932	$1,726
New York -Newark-Jersey City	$719	$284	$1,765	$2,768
Poughkeepsie-Newburgh-Middletown	$341	$587	$880	$1,808
Rochester	$305	$515	$902	$1,722
Syracuse	$429	$593	$538	$1,560
Utica	$309	$514	$439	$1,262
New York Statewide	**$7 Billion**	**$4.8 Billion**	**$13 Billion**	**$24.8 Billion**

NEW YORK ROADS PROVIDE A ROUGH RIDE

Due to inadequate state and local funding, 49 percent of major roads and highways in New York are in poor or mediocre condition. Driving on rough roads costs the average New York driver $587 annually in additional vehicle operating costs.

Location	Poor	Mediocre	Fair	Good
Albany-Schenectady-Troy	15%	20%	20%	45%
Binghamton	18%	23%	23%	36%
Buffalo - Niagara Falls	15%	25%	21%	39%
New York -Newark-Jersey City	46%	23%	13%	18%
Poughkeepsie-Newburgh-Middletown	13%	23%	19%	46%
Rochester	11%	18%	24%	47%
Syracuse	22%	19%	15%	43%
Utica	10%	23%	21%	46%
New York Statewide	**28%**	**21%**	**17%**	**34%**

A 2017 report by Rebuild New York found that the state faces a $5.5 billion backlog in needed pavement repairs for state-maintained roads and highways. The report also calculated that the state's annual $325 million paving budget would need to be increased by 60 percent (to $520 million annually) to maintain current pavement conditions, and would need to be more than doubled (to $710 million annually) to improve pavement conditions on state-maintained roads and highways.

Pavements on thirty-four percent of the 559-mile New York Thruway system are rated in poor or very poor condition, 28 percent are rated in fair condition and 38 percent are rated in good or excellent condition.

NEW YORK BRIDGE CONDITIONS

Ten percent of New York's bridges are in poor condition, meaning there is significant deterioration of the bridge deck, supports or other major components. Most bridges are designed to last 50 years before major overhaul or replacement, although many newer bridges are being designed to last 75 years or longer. In New York, 52 percent of the state's bridges (9,039 of 17,444) were built in 1969 or earlier.

Location	Share of Bridges in Poor Condition	Number of Bridges in Poor Condition	Share of Bridges in Fair Condition	Number of Bridges in Fair Condition	Share of Bridges in Good Condition	Number of Bridges in Good Condition	Total Bridges
Albany-Schenectady-Troy	8%	69	56%	470	36%	298	837
Binghamton	8%	57	53%	358	39%	261	676
Buffalo - Niagara Falls	9%	100	44%	506	48%	554	1,160
New York -Newark-Jersey City	8%	491	65%	4269	27%	1765	6,525
Poughkeepsie-Newburgh-Middletown	12%	94	65%	526	23%	190	810
Rochester	10%	120	50%	616	41%	501	1,237
Syracuse	12%	135	60%	670	28%	306	1,111
Utica	11%	50	50%	237	39%	186	473
New York Statewide	10%	1,771	53%	9,313	36%	6,360	17,444

Approximately two-thirds (531 of 809) of bridges on the New York Thruway system are more than 60-years-old.

NEW YORK ROADS ARE INCREASINGLY CONGESTED

Congested roads choke commuting and commerce and cost New York drivers $13 billion each year in the form of lost time and wasted fuel. In the most congested urban areas, drivers lose up to $1,765 and more than three full days each year in congestion.

Location	Hours Lost to Congestion	Annual Cost Per Driver
Albany-Schenectady-Troy	42	$1,006
Binghamton	16	$388
Buffalo - Niagara Falls	40	$932
New York -Newark-Jersey City	74	$1,765
Poughkeepsie-Newburgh-Middletown	37	$880
Rochester	39	$902
Syracuse	22	$538
Utica	19	$439

NEW YORK TRAFFIC SAFETY AND FATALITIES

From 2012 to 2016, 5,552 people were killed in traffic crashes in New York. Traffic crashes imposed a total of $14.3 billion in economic costs in New York in 2016 and traffic crashes in which roadway features were likely a contributing factor imposed $4.8 billion in economic costs – an average of $398 per New York driver.

Location	Average Fatalities 2014-2016	Average Crash Costs
Albany-Schenectady-Troy	49	$506
Binghamton	20	$591
Buffalo - Niagara Falls	64	$412
New York -Newark-Jersey City	623	$284
Poughkeepsie-Newburgh-Middletown	55	$587
Rochester	76	$515
Syracuse	53	$593
Utica	16	$514

TRANSPORTATION AND ECONOMIC DEVELOPMENT

The health and future growth of New York's economy is riding on its transportation system. Each year, $1.3 trillion in goods are shipped to and from sites in New York, mostly by truck. Increases in passenger and freight movement will place further burdens on the state's already deteriorated and congested network of roads and bridges.

The design, construction and maintenance of transportation infrastructure in New York supports 318,604 full-time jobs across all sectors of the state economy. These workers earn $9.8 billion annually. Approximately 3.5 million full-time jobs in New York in key industries like tourism, retail sales, agriculture and manufacturing are completely dependent on the state's transportation network.

INTRODUCTION

New York's roads, highways and bridges form vital transportation links for the state's residents, visitors and businesses, providing daily access to homes, jobs, shopping, natural resources and recreation. Modernizing New York's transportation system is critical to quality of life and economic competitiveness in the Empire State. Inadequate transportation investment, which will result in deteriorated transportation facilities and diminished access, will negatively affect New York's economic competitiveness and quality of life.

To accommodate population and economic growth, maintain its level of economic competitiveness and achieve further economic growth, New York will need to maintain and modernize its roads, highways and bridges by improving the physical condition of its transportation network and enhancing the system's ability to provide efficient, reliable and safe mobility for residents, visitors and businesses. Making needed improvements to New York's roads, highways, bridges and transit systems could also provide a significant boost to the state's economy by creating jobs in the short term and stimulating long-term economic growth as a result of enhanced mobility and access.

This report examines the condition, use and safety of New York's roads, highways and bridges, and the state's future mobility needs. Sources of information for this report include the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), the Bureau of Transportation Statistics (BTS), the U.S. Census Bureau, the Texas Transportation Institute (TTI), the American Road & Transportation Builders Association (ARTBA) and the National Highway Traffic Safety Administration (NHTSA).

In addition to the statewide report, TRIP has produced customized regional reports for the Albany-Schenectady-Troy, Binghamton, Buffalo-Niagara Falls, New York-Newark-Jersey City, Poughkeepsie-Newburgh-Middletown, Rochester, Syracuse and Utica areas.

An urban area is defined as a region's municipalities and surrounding suburbs for pavement condition and congestion data; bridge and traffic fatality data include a region's major counties.[1]

POPULATION, TRAVEL AND ECONOMIC TRENDS IN NEW YORK

New York motorists and businesses require a high level of personal and commercial mobility. To foster quality of life and spur continued economic growth, it is critical that the state provide a safe and modern transportation system that can accommodate future growth in population, tourism, business, recreation and vehicle travel.

New York's population grew to approximately 19.8 million residents in 2017, a five percent increase since 2000.[2] New York had approximately 11.9 million licensed drivers in 2016.[3] From 2000 to 2016, New York's gross domestic product (GDP), a measure of the state's economic output, increased by 25 percent, when adjusted for inflation.[4] U.S. GDP increased 30 percent during the same period.[5] In 2016, the state's transportation system carried 123 billion annual vehicle miles of travel (VMT).[6]

CONDITION OF NEW YORK ROADS

The life cycle of New York's roads is greatly affected by the state and local governments' ability to perform timely maintenance and upgrades to ensure that road and highway surfaces last as long as possible.

The pavement data in this report, which is for all arterial and collector roads and highways, is provided by the Federal Highway Administration (FHWA), based on data submitted annually by the New York Department of Transportation on the condition of major state and locally maintained roads and highways. Pavement data for Interstate highways and other principal arterials is collected for all system mileage, whereas pavement data for minor arterial and all collector roads and highways is based on sampling portions of roadways as prescribed by FHWA to insure the data collected is adequate to provide an accurate assessment of pavement conditions on these roads and highways.

Statewide, nearly half of New York's major roads are in poor or mediocre condition. Twenty-eight percent of New York's major locally and state-maintained roads are in poor condition and 21 percent are in mediocre condition.[7] Seventeen percent of New York's major roads are in fair condition and the remaining 34 percent are in good condition.[8]

Forty-one percent of New York's major locally and state-maintained urban roads and highways have pavements rated in poor condition and 24 percent are in mediocre condition.[9] Fourteen percent of New York's major urban roads are rated in fair condition and the remaining 21 percent are rated in good condition.[10]

Nine percent of New York's major locally and state-maintained rural roads and highways have pavements rated in poor condition and 18 percent are in mediocre condition.[11] Twenty percent of New York's major rural roads are rated in fair condition and the remaining 53 percent are rated in good condition.[12] The chart below details pavement conditions on major urban roads in the state's largest urban areas.[13]

Chart 1. Pavement conditions on major roads in New York's largest urban areas and statewide.

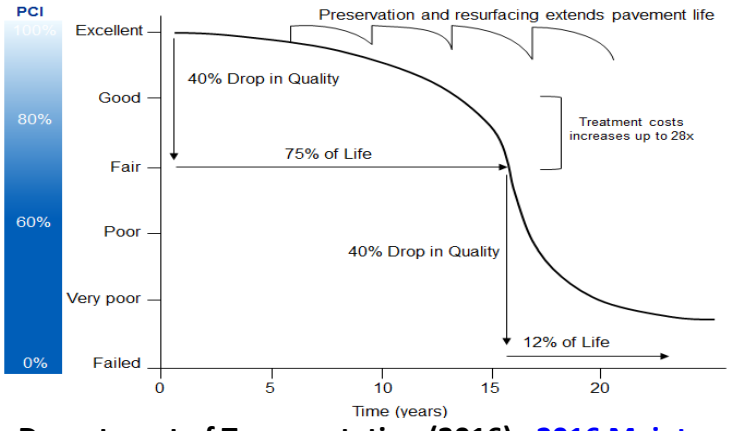
Location	Poor	Mediocre	Fair	Good
Albany-Schenectady-Troy	15%	20%	20%	45%
Binghamton	18%	23%	23%	36%
Buffalo - Niagara Falls	15%	25%	21%	39%
New York -Newark-Jersey City	46%	23%	13%	18%
Poughkeepsie-Newburgh-Middletown	13%	23%	19%	46%
Rochester	11%	18%	24%	47%
Syracuse	22%	19%	15%	43%
Utica	10%	23%	21%	46%
New York Statewide	**28%**	**21%**	**17%**	**34%**

Source: TRIP analysis of Federal Highway Administration data.

In 2017, based on the Pavement Distress Index, 34 percent of the 559-mile New York Thruway system was rated in poor or very poor condition, 28 percent was rated in fair condition and 38 percent was rated in good or excellent condition.[14]

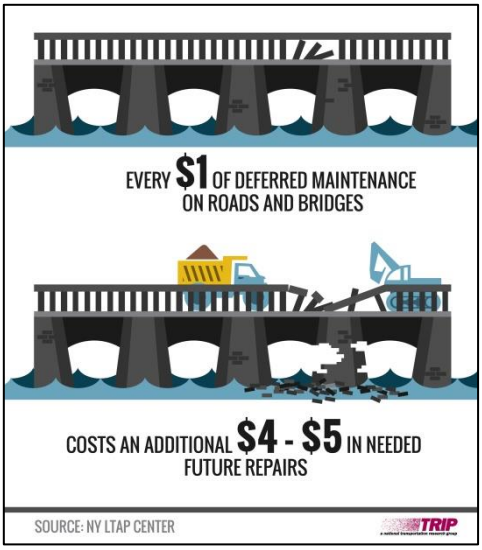
Pavement failure is caused by a combination of traffic, moisture and climate. Moisture often works its way into road surfaces and the materials that form the road's foundation. Road surfaces at intersections are more prone to deterioration because the slow-moving or standing loads occurring at these sites subject the pavement to higher levels of stress. It is critical that roads are fixed before they require major repairs because reconstructing roads costs approximately four times more than resurfacing them.[15] As roads and highways continue to age, they will reach a point of deterioration where routine paving and maintenance will not be adequate to keep pavement surfaces in good condition and costly reconstruction of the roadway and its underlying surfaces will become necessary.

Chart 2. Pavement Condition Cycle Time with Treatment and Cost



Source: North Carolina Department of Transportation (2016). 2016 Maintenance Operations and Performance Analysis Report

Long-term repair costs increase significantly when road and bridge maintenance is deferred, as road and bridge deterioration accelerates later in the service life of a transportation facility and requires more costly repairs. A report on maintaining pavements found that every $1 of deferred maintenance on roads and bridges costs an additional $4 to $5 in needed future repairs.[16]



A 2017 report by Rebuild New York, prepared by former New York Department of Transportation pavement manager John Shufon, found that the state faces a $5.5 billion backlog in needed pavement repairs for state-maintained roads and highways.[17] The report found that from 2012 to 2016 the state's annual paving program declined by 47 percent, from $614 million to $325 million. As a result the average re-paving cycle increased from approximately nine years in 2012 to 23 years in 2016 (a paving cycle of 12 years is considered optimum).[18] The report concluded that the state's annual $325 million paving budget (2016) would need to be increased by 60 percent to $520 million annually to maintain current pavement conditions and would need to be more than doubled to $710 million annually to improve pavement conditions on state-maintained roads and highways.[19]

THE COST TO MOTORISTS OF ROADS IN INADEQUATE CONDITION

TRIP has calculated the additional cost to motorists of driving on roads in poor, mediocre or fair condition. When roads are in poor, mediocre or fair condition – which may include potholes, rutting or rough surfaces – the cost to operate and maintain a vehicle increases. These additional vehicle operating costs (VOC) include accelerated vehicle depreciation, additional vehicle repair costs, increased fuel consumption and increased tire wear. TRIP estimates that additional VOC borne by New York motorists as a result of deteriorated road conditions is $7 billion annually, an average of $587 per driver statewide.[20] The chart below details additional VOC per motorist in the state's largest urban areas.

Chart 3. Vehicle operating costs per motorist as a result of driving on deteriorated roads.

Location	VOC
Albany-Schenectady-Troy	$351
Binghamton	$417
Buffalo - Niagara Falls	$382
New York -Newark-Jersey City	$719
Poughkeepsie-Newburgh-Middletown	$341
Rochester	$305
Syracuse	$429
Utica	$309
New York Statewide	**$7 Billion**

Source: TRIP estimates.

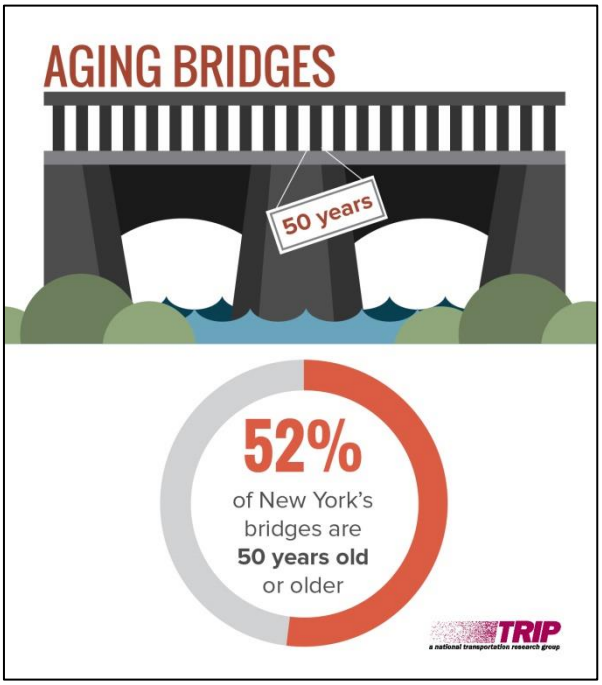
Additional vehicle operating costs have been calculated in the Highway Development and Management Model (HDM), which is recognized by the U.S. Department of Transportation and more than 100 other countries as the definitive analysis of the impact of road conditions on vehicle operating costs. The HDM report is based on numerous studies that have measured the impact of various factors, including road conditions, on vehicle operating costs.[21] The HDM study found that road deterioration increases ownership, repair, fuel and tire costs. The report found that deteriorated roads accelerate the pace of depreciation of vehicles and the need for repairs because the stress on the vehicle increases in proportion to the level of roughness of the pavement surface. Similarly, tire wear and fuel consumption increase as roads deteriorate since there is less efficient transfer of power to the drive train and additional friction between the road and the tires.

TRIP's additional VOC estimate is based on taking the average number of miles driven annually by a motorist, calculating current VOC based on AAA's 2017 VOC and then using the HDM model to estimate the additional VOC paid by drivers as a result of substandard roads.[22] Additional research on the impact of road conditions on fuel consumption by the Texas Transportation Institute (TTI) is also factored in to TRIP's vehicle operating cost methodology.

BRIDGE CONDITIONS IN NEW YORK

New York's bridges form key links in the state's highway system, providing communities and individuals access to employment, schools, shopping and medical facilities, and facilitating commerce and access for emergency vehicles.

Ten percent of New York's locally and state-maintained bridges are rated in poor condition, while 53 percent are in fair condition and 36 percent are in good condition.[23] This includes all bridges that are 20 feet or more in length. A bridge is rated in poor condition if there is significant deterioration of the bridge deck, supports or other major components. Bridges that are in poor condition may be posted for lower weight limits or closed if their condition warrants such action. Deteriorated bridges can have a significant impact on daily life. Restrictions on vehicle weight may cause many vehicles – especially emergency vehicles, commercial trucks, school buses and farm equipment – to use alternate routes to avoid posted bridges. Redirected trips also lengthen travel time, waste fuel and reduce the efficiency of the local economy. Bridges rated fair have been found to have some minor deterioration of the bridge deck, supports or other major components.



Most bridges are designed to last 50 years before major overhaul or replacement, although many newer bridges are being designed to last 75 years or longer. In New York, 52 percent of the state's bridges (9,039 of 17,456) were built in 1969 or earlier.[24]

Approximately two- thirds (531 of 809) bridges on the New York Thruway system are more than 60 years-old.[25]

The chart below details the number and share of bridges in the state's largest urban areas and statewide that are in poor, fair or good condition.

Chart 4. Number and share of bridges in poor, fair and good condition statewide and in New York's largest urban areas.

Location	Share of Bridges in Poor Condition	Number of Bridges in Poor Condition	Share of Bridges in Fair Condition	Number of Bridges in Fair Condition	Share of Bridges in Good Condition	Number of Bridges in Good Condition	Total Bridges
Albany-Schenectady-Troy	8%	69	56%	470	36%	298	837
Binghamton	8%	57	53%	358	39%	261	676
Buffalo - Niagara Falls	9%	100	44%	506	48%	554	1,160
New York -Newark-Jersey City	8%	491	65%	4269	27%	1765	6,525
Poughkeepsie-Newburgh-Middletown	12%	94	65%	526	23%	190	810
Rochester	10%	120	50%	616	41%	501	1,237
Syracuse	12%	135	60%	670	28%	306	1,111
Utica	11%	50	50%	237	39%	186	473
New York Statewide	10%	1,771	53%	9,313	36%	6,360	17,444

Source: TRIP analysis of Federal Highway Administration National Bridge Inventory (2017).

The service life of bridges can be extended by performing routine maintenance such as resurfacing decks, painting surfaces, insuring that a facility has good drainage and replacing deteriorating components. But, most bridges will eventually require more costly reconstruction or major rehabilitation to remain operable.

TRAFFIC SAFETY IN NEW YORK

A total of 5,552 people were killed in New York traffic crashes from 2012 to 2016, an average of 1,110 fatalities per year.[26]

Chart 5. Traffic Fatalities in New York 2012 – 2016

Year	Fatalities
2012	1,168
2013	1,199
2014	1,039
2015	1,121
2016	1,025
TOTAL	**5,552**

Source: National Highway Traffic Safety Administration.

Three major factors are associated with fatal vehicle crashes: driver behavior, vehicle characteristics and roadway features. It is estimated that roadway features are likely a contributing factor in approximately one-third of fatal traffic crashes. Roadway features that impact safety include the number of lanes, lane widths, lighting, lane markings, rumble strips, shoulders, guard rails, other shielding devices, median barriers and intersection design.

New York's overall traffic fatality rate of 0.83 fatalities per 100 million vehicle miles of travel in 2016 is lower than the national average of 1.18.[27] The traffic fatality rate on the state's rural roads is disproportionately high. The fatality rate on New York's non-interstate rural roads is approximately three and a half times that on all other roads in the state (2.11 fatalities per 100 million vehicle miles of travel vs. 0.60).[28]

The chart below details the number of people killed in traffic crashes in the state's largest urban areas between 2014 and 2016, and the cost of traffic crashes per driver.

Chart 6. Average fatalities between 2014 and 2016 and crash cost per driver.

Location	Average Fatalities 2014-2016	Average Crash Costs
Albany-Schenectady-Troy	49	$506
Binghamton	20	$591
Buffalo - Niagara Falls	64	$412
New York -Newark-Jersey City	623	$284
Poughkeepsie-Newburgh-Middletown	55	$587
Rochester	76	$515
Syracuse	53	$593
Utica	16	$514

Source: TRIP analysis.

Traffic crashes in New York imposed a total of $14.3 billion in economic costs in 2016.[29] TRIP estimates that roadway features were likely a contributing factor in approximately one-third of all fatal traffic crashes, resulting in $4.8 billion in economic costs in 2016 -- an average of $398 per New York driver.[30] According to a 2015 National Highway Traffic Safety Administration (NHTSA) report, the economic costs of traffic crashes includes work and household productivity losses, property damage, medical costs, rehabilitation costs, legal and court costs, congestion costs and emergency services.[31]

Improving safety on New York's roadways can be achieved through further improvements in vehicle safety; improvements in driver, pedestrian, and bicyclist behavior; and, a variety of improvements in roadway safety features.

The severity of serious traffic crashes could be reduced through roadway improvements, where appropriate, such as adding turn lanes, removing or shielding obstacles, adding or improving medians, widening lanes, widening and paving shoulders, improving intersection layout, and providing better road markings and upgrading or installing traffic signals. Roads with poor geometry, with insufficient clear distances, without turn lanes, having inadequate shoulders for the posted speed limits, or poorly laid out intersections or interchanges, pose greater risks to motorists, pedestrians and bicyclists.

Investments in rural traffic safety have been found to result in significant reductions in serious traffic crashes. A 2012 report by TTI found that improvements completed recently by TxDOT that widened lanes, improved shoulders and made other safety improvements on 1,159 miles of rural state roadways resulted in 133 fewer fatalities on these roads in the first three years after the improvements

were completed (as compared to the three years prior).[32] TTI estimates that the improvements on these roads are likely to save 880 lives over 20 years.[33]

TRAFFIC CONGESTION IN NEW YORK

Increasing levels of traffic congestion cause significant delays in New York, particularly in its larger urban areas, choking commuting and commerce. Traffic congestion robs commuters of time and money and imposes increased costs on businesses, shippers and manufacturers, which are often passed along to the consumer. Increased levels of congestion can also reduce the attractiveness of a location to a company when considering expansion or where to locate a new facility.

Based on TTI methodology, TRIP estimates the value of lost time and wasted fuel in New York is approximately $13 billion a year. The chart below details the number of hours lost annually for each driver in the state's largest urban areas, and the per-driver cost of lost time and wasted fuel due to congestion.

Chart 7. Annual hours lost to congestion and congestion costs per driver.

Location	Hours Lost to Congestion	Annual Cost Per Driver
Albany-Schenectady-Troy	42	$1,006
Binghamton	16	$388
Buffalo - Niagara Falls	40	$932
New York -Newark-Jersey City	74	$1,765
Poughkeepsie-Newburgh-Middletown	37	$880
Rochester	39	$902
Syracuse	22	$538
Utica	19	$439

Source: TRIP estimates based on Texas Transportation Institute Urban Mobility Report.

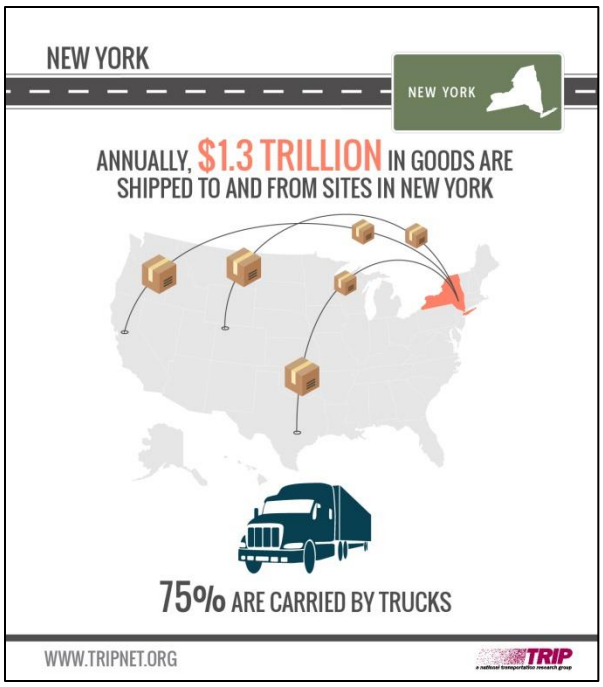
TRANSPORTATION AND ECONOMIC GROWTH

Today's culture of business demands that an area have well-maintained and efficient roads, highways and bridges if it is to remain economically competitive. Global communications and the impact of free trade in North America and elsewhere have resulted in a significant increase in freight movement, making the quality of a region's transportation system a key component in a business's ability to compete locally, nationally and internationally.

Businesses have responded to improved communications and the need to cut costs with a variety of innovations including just-in-time delivery, increased small package delivery, demand-side inventory management and e-commerce. The result of these changes has been a significant improvement in logistics efficiency as firms move from a push-style distribution system, which relies on large-scale warehousing of materials, to a pull-style distribution system, which relies on smaller, more strategic movement of goods. These improvements have made mobile inventories the norm, resulting in the nation's trucks literally becoming rolling warehouses.

Highways are vitally important to continued economic development in New York. As the economy expands, creating more jobs and increasing consumer confidence, the demand for consumer and business products grows. In turn, manufacturers ship greater quantities of goods to market to meet this demand, a process that adds to truck traffic on the state's highways and major arterial roads.

Every year, $1.3 trillion in goods are shipped to and from sites in New York, mostly by trucks.[34]



Seventy-five percent of the goods shipped annually to and from sites in New York are carried by trucks and another 19 percent are carried by courier services or multiple-mode deliveries, which include trucking.[35]

The design, construction and maintenance of transportation infrastructure in New York play a critical role in the state's economy, supporting the equivalent of 318,604 full-time jobs across all sectors of the state economy, earning these workers approximately $9.8 billion annually.[36] These jobs include 158,718 full-time jobs directly involved in transportation infrastructure construction and related activities. Spending by employees and companies in the transportation design and construction industry support an additional 159,886 full-time jobs.[37]

Transportation construction in New York contributes an estimated $1.8 billion annually in state and local income, corporate and unemployment insurance taxes and the federal payroll tax.[38]

More than 3.5 million full-time jobs in New York in key industries like tourism, retail sales, agriculture and manufacturing are dependent on the quality, safety and reliability of the state's transportation infrastructure network. These workers earn $145 billion in wages and contribute an

estimated $26.4 billion in state and local income, corporate and unemployment insurance taxes and the federal payroll tax.[39]

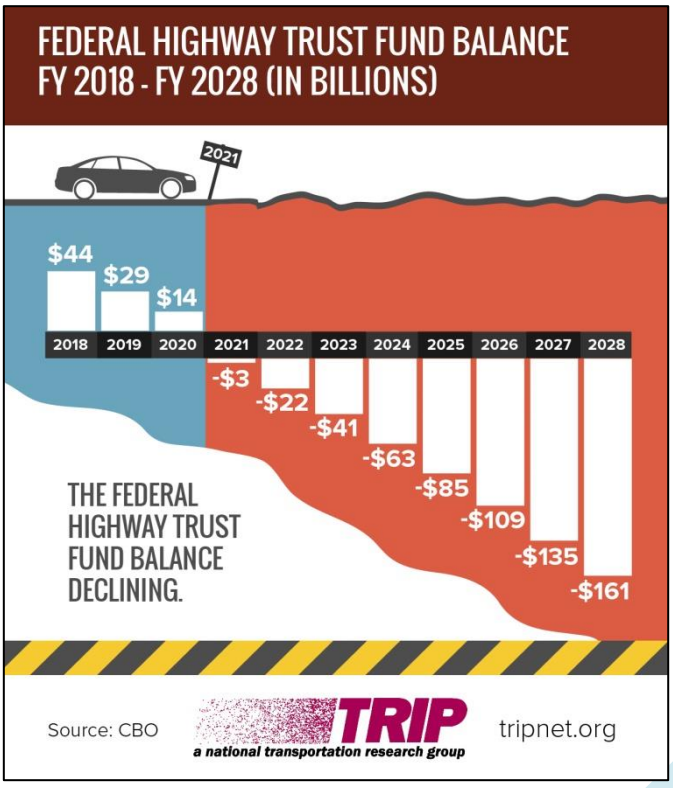
Local, regional and state economic performance is improved when a region's surface transportation system is expanded or repaired. This improvement comes as a result of the initial job creation and increased employment created over the long-term because of improved access, reduced transport costs and improved safety.

Increasingly, companies are looking at the quality of a region's transportation system when deciding where to re-locate or expand. Regions with congested or poorly maintained roads may see businesses relocate to areas with a smoother, more efficient and more modern transportation system. Highway accessibility was ranked the number one site selection factor in a 2017 survey of corporate executives by Area Development Magazine. Labor costs and the availability of skilled labor, which are both impacted by a site's level of accessibility, were rated second and third, respectively.[40]

TRANSPORTATION FUNDING

Investment in New York's roads, highways and bridges is funded by local, state and federal governments. A lack of sufficient funding at all levels will make it difficult to adequately maintain and improve the state's existing transportation system.

The federal government is a critical source of funding for New York's roads, highways, bridges and transit systems and provides a significant return in road and bridge funding based on the revenue generated in the state by the federal motor fuel tax.



Most federal funds for highway and transit improvements in New York are provided by federal highway user fees, largely an 18.4 cents-per-gallon tax on gasoline and a 24.4 cents-per-gallon tax on diesel fuel. Since 2008 revenue into the federal Highway Trust Fund has been inadequate to support legislatively set funding levels so Congress has transferred

approximately $53 billion in general funds and an additional $2 billion from a related trust fund into the federal Highway Trust Fund.[41]

Signed into law in December 2015, the Fixing America's Surface Transportation Act (FAST Act), provides modest increases in federal highway and transit spending. The five-year bill also provides states with greater funding certainty and streamlines the federal project approval process. But, the FAST Act does not provide adequate funding to meet the nation's need for highway and transit improvements and does not include a long-term and sustainable funding source.

The five-year, $305 billion FAST Act will provide a boost of approximately 15 percent in highway funding and 18 percent in transit funding over the duration of the program, which expires in 2020.[42] In addition to federal motor fuel tax revenues, the FAST Act will also be funded by $70 billion in U.S. general funds, which will rely on offsets from several unrelated federal programs including the Strategic Petroleum Reserve, the Federal Reserve and U.S. Customs.

According to the 2015 Status of the Nation's Highways, Bridges and Transit: Conditions and Performance report submitted by the United States Department of Transportation (USDOT) to Congress, the nation faces an $836 billion backlog in needed repairs and improvements to the nation's roads, highways and bridges.[43] The USDOT report found that the nation's current $105 billion investment in roads, highways and bridges by all levels of government should be increased by 35 percent to $142.5 billion annually to improve the conditions of roads, highways and bridges, relieve traffic congestion and improve traffic safety.

President Trump's infrastructure plan, released in February 2018, would provide $200 billion in new federal grants and loans over 10 years to leverage $1.5 trillion in total project spending on infrastructure, including surface transportation. State and local governments and the private sector would be required to raise the additional $1.3 trillion to access the federal grants and loans provided under this initiative. Congress has not yet crafted a transportation program in response to the Trump proposal and would need to identify a long-term, sustainable source of funding to support increased funding for the federal Highway Trust Fund.

CONCLUSION

As New York works to build and enhance a thriving, growing and dynamic state, it will be critical that it is able to address the state's most significant transportation issues by providing a 21st century

network of roads, highways, bridges and transit that can accommodate the mobility demands of a modern society.

New York will need to modernize its surface transportation system by improving the physical condition of its transportation network and enhancing the system's ability to provide efficient, safe and reliable mobility for residents, visitors and businesses. Making needed improvements to the state's roads, highways, bridges and transit systems would provide a significant boost to the economy by creating jobs in the short term and stimulating long-term economic growth as a result of enhanced mobility and access.

Despite the modest funding increase provided by the FAST Act, numerous projects to improve the condition and expand the capacity of New York's roads, highways, bridges and transit systems will not be able to proceed without a substantial boost in state or local transportation funding. If New York is unable to complete needed transportation projects it will hamper the state's ability to improve the condition and efficiency of its transportation system or enhance economic development opportunities and quality of life.

# # #

ENDNOTES

[1] Bridge condition data and safety data for each urban area includes the counties noted: Albany-Schenectady-Troy: Albany, Saratoga and Rensselaer Counties; Binghamton: Broome and Tioga Counties; Buffalo: Erie and Niagara Counties; New York: Kings, Queens, New York, Bronx, Richmond, Westchester, Rockland, Fairfield (CT), New Haven (CT), Bergen (NJ), Hudson (NJ), Middlesex (NJ), Monmouth (NJ), Ocean (NJ) and Passaic (NJ Counties; Poughkeepsie-Newburg: Duchess and Orange Counties; Rochester: Livingston, Monroe, Ontario, Orleans, Wayne and Yates Counties; Syracuse: Onondaga, Oswego and Madison Counties; Utica: Oneida County.
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https://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm
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[8] Ibid.
[9] Ibid.
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[18] Ibid.
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[24] TRIP analysis of Federal Highway Administration National Bridge Inventory data (2018).
[25] Thruway Authority (2018). Current Infrastructure Information.
https://www.thruway.ny.gov/oursystem/capitalprogram/current-infra-info.html
[26] Federal Highway Administration National Highway Traffic Safety Administration, 2012-2016.
[27] TRIP analysis of National Highway Traffic Safety Administration and Federal Highway Administration data (2017). Data is for 2016.
[28] TRIP analysis of National Highway Traffic Safety Administration and Federal Highway Administration data (2016).
[29] TRIP estimate based on NHTSA report "The Economic and Societal Impact of Motor Vehicle Crashes, 2010 (Revised), 2016. P. 146.
[30] Ibid.
[31] The Economic and Societal Impact of Motor Vehicle Crashes, 2010 (Revised) (2015). National Highway Traffic Safety Administration. P. 1. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812013

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[33] Ibid.
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