

FUTURE MOBILITY IN NEW JERSEY

Meeting the State's Need for Safe and Efficient Mobility

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

FUTURE MOBILITY IN NEW JERSEY

New Jersey's extensive system of roads, bridges and public transportation provides the state's residents and its visitors with a high level of personal and commercial mobility. As the backbone of New Jersey's surface transportation system, roads and bridges play a central role in the state's economy, including the pharmaceutical, manufacturing, energy, distribution, agricultural and tourism sectors.

The recently approved economic stimulus package will provide a significant, short-term boost in transportation funding in New Jersey by providing a total of approximately \$1.1 billion, including \$652 million for road and bridge improvements and \$424 million for the state's public transit system. However, this funding will not be sufficient to allow the state to proceed with many needed long-term projects that would improve safety, reduce congestion, expand capacity, maintain a state of good repair and modernize the surface transportation system.

Over the next ten years, New Jersey faces an estimated transportation funding shortfall of \$35 billion. Numerous projects needed to maintain and expand the current transportation system will not be able to move forward without a significant, long-term boost in funding at the state or federal level.

- In 2008, a 10-year statewide capital investment strategy found that approximately \$70 billion will be needed from 2009 to 2018 to improve road and bridge conditions, mitigate congestion, increase highway safety and improve New Jersey's public transit system. However, based on current funding projections, only \$35 billion will be available during that time, leaving a shortfall of \$35 billion.
- Making needed repairs to the state's transportation system can help boost New Jersey's economy. A 2007 analysis by the Federal Highway Administration found that every \$1 billion invested in highway construction would support approximately 27,800 jobs, including approximately 9,500 in the construction sector, approximately 4,300 jobs in industries supporting the construction sector, and approximately 14,000 jobs induced in non-construction related sectors of the economy.
- It is imperative to New Jersey that Congress approves a new long-term federal surface transportation program that provides adequate funding to meet the nation's surface transportation needs. The current program -- the Safe, Accountable, Flexible, and Efficient Transportation Equity Act -- A Legacy for Users (SAFETEA-LU)-- expires on September 30, 2009.
- The level of funding and the provisions of a future federal surface transportation program will have a significant impact on future highway and bridge conditions and safety as well as level of transit service in New Jersey, which, in turn, will affect the state's ability to improve its residents' quality of life and enhance economic development opportunities in the state.

- Two congressionally appointed commissions and a national organization representing state transportation departments have recommended a broad overhaul of the Federal Surface Transportation Program to improve mobility, safety and the physical condition of the nation's surface transportation system by significantly boosting funding, consolidating the program into fewer categories, speeding up project delivery and requiring greater accountability in project selection.
- New Jersey's funding shortfall has been exacerbated by the escalation of the cost of transportation improvements due to rapid increases in the price of key materials needed for highway and bridge construction. The average cost of materials used for highway and bridge construction – including asphalt, concrete, steel, lumber and diesel – increased by 40 percent over the five-year period from March 2004 to March 2009.

Nearly half of major roads in the state, which are maintained by municipal, county and state governments, are rated deficient, providing the state's motorists with a rough ride.

- In 2007, 46 percent of major roads and highways in New Jersey, which include roads and highways maintained by local and state governments, were rated deficient. Major roads include Interstates, freeways and arterials.
- Roads rated deficient often have significant rutting, potholes or other visible signs of deterioration and typically need to be resurfaced or reconstructed.
- Driving on roads in need of repair costs each New Jersey motorist an average of \$596 annually in extra vehicle operating costs – the highest in the nation and nearly double the national average of \$335. Driving on roads in need of repair costs the state's motorists a total of \$3.5 billion each year. These costs include accelerated vehicle depreciation, additional vehicle repair costs, increased fuel consumption and increased tire wear.
- The functional life of New Jersey's roads is greatly affected by the state's ability to perform timely maintenance and upgrades to ensure that structures last as long as possible. It is critical that roads are fixed before they require major repairs because reconstructing roads costs approximately four times more than resurfacing them.

Approximately one-third of New Jersey's 6,447 bridges show significant deterioration or do not meet current design standards. This includes all bridges that are 20 feet or more in length and are maintained by state, local and federal agencies.

- Nearly 13 percent of New Jersey's bridges were structurally deficient in 2008. A bridge is structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Structurally deficient bridges are often posted for lower weight or closed to traffic, restricting or redirecting commercial trucks and other larger vehicles including emergency service vehicles.
- Twenty-three percent of New Jersey's bridges were functionally obsolete in 2008. Bridges that are functionally obsolete no longer meet current highway design standards, often because of narrow lanes and shoulders, inadequate clearances or poor alignment.

- At present, 15 percent of state bridges, 31 percent of county/municipal bridges, 59 percent of NJ TRANSIT bridges and 38 percent of private bridges are older than 75 years. While the average design life expectancy of a new bridge is 75 years, many older bridges were built with a life expectancy of only 50 years. The average age of bridges in New Jersey is 49 years.

Increases in the state’s population and rate of vehicle travel have led to rising congestion on New Jersey’s major roadways. Traffic congestion in New Jersey is a growing burden in key urban areas and threatens to impede the state’s economic development.

- Vehicle travel on New Jersey’s major highways increased by 29 percent from 1990 to 2006 – jumping from 59 billion vehicle miles traveled (VMT) in 1990 to 76 billion VMT in 2006. Although VMT dropped off in 2007 and 2008, likely due to rising fuel prices and the economic recession, travel in New Jersey is expected to increase by 30 percent by 2025, reaching approximately 99 billion VMT.
- New Jersey’s population reached approximately 8.7 million in 2008, an increase of 12 percent and nearly one million people since 1990. New Jersey’s population is expected to increase to 9.6 million by 2025, an increase of approximately 900,000 people.
- Congestion on New Jersey’s urban highways is growing as a result of increases in vehicle travel and population. In 2007, 64 percent of New Jersey’s urban highways were congested, carrying traffic volumes that result in significant rush hour delays.

More than 3,700 people were killed in crashes on New Jersey’s roads from 2003 to 2007. Improving safety features on New Jersey’s roads and highways would likely result in a decrease in traffic fatalities in the state.

- Between 2003 and 2007, 3,722 people were killed in traffic crashes in New Jersey, an average of 744 fatalities per year. In 2008, the number of fatalities dropped to 594, the lowest number in 50 years.
- The New Jersey Department of Transportation (NJDOT) continues to make efforts to further reduce serious traffic crashes in the state, which cause, in addition to fatalities, approximately 75,000 injuries and 300,000 crashes per year. The economic cost alone of these crashes is estimated at \$9 billion annually, which includes medical costs and lost productivity.
- Several factors are associated with vehicle accidents that result in fatalities, including driver behavior, vehicle characteristics and roadway design. An analysis of national traffic crash statistics indicates that the design of roadways is a factor in approximately 30 percent of these crashes.
- Where appropriate, highway improvements such as adding turn lanes, removing or shielding obstacles, adding medians, widening lanes, widening and paving shoulders, improving intersection layouts, providing better road markings, and installing or upgrading traffic signals, could reduce the severity of serious traffic crashes.

- The Federal Highway Administration has found that every \$100 million spent on needed highway safety improvements will result in 145 fewer traffic fatalities over a 10-year period.

The efficiency of New Jersey’s transportation system, particularly its highways, is critical to the health of the state’s economy. Businesses are increasingly reliant on an efficient and reliable transportation system to move products and services. A key component in business efficiency and success is the level and ease of access to customers, markets, materials and workers.

- Approximately \$287 billion in goods are shipped annually from sites in New Jersey and another \$267 billion in goods are shipped annually to sites in New Jersey, mostly by commercial trucks on the state’s highways.
- Seventy-three percent of the goods shipped annually from sites in New Jersey are carried by trucks and another 19 percent are carried by courier services, which use trucks for part of the deliveries. Similarly, 74 percent of the goods shipped to sites in New Jersey are carried by trucks and another 14 percent are carried by courier services.
- Commercial trucking in New Jersey is projected to increase 26 percent by 2020.
- 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 transportation system.
- Businesses have responded to improved communications and greater competition by moving from a push-style distribution system, which relies on low-cost movement of bulk commodities and large-scale warehousing, to a pull-style distribution system, which relies on smaller, more strategic and time-sensitive movement of goods.

All data used in the report is the latest available.

Sources of information for this study include the New Jersey Department of Transportation (NJDOT), the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the National Surface Transportation Policy and Revenue Study Commission (NSTPRSC), the U.S. Census Bureau, the Bureau of Transportation Statistics (BTS), the American Association of State Highway and Transportation Officials (AASHTO), the National Surface Transportation Infrastructure Financing Commission (NSTIFC), the National Highway Traffic Safety Administration (NHTSA), the Reason Foundation and the Texas Transportation Institute (TTI).

Introduction

New Jersey's system of roads, bridges and public transportation provides the state's residents and visitors with a high level of mobility. As the backbone of the Garden State's surface transportation system, roads, bridges and public transit play a central role in the state's economy and enable residents and visitors to go to work, visit family and friends, move goods to market, and frequent tourist attractions.

New Jersey faces significant challenges in addressing deteriorated road and bridge conditions and worsening traffic congestion. The modernization of New Jersey's roads, bridges and transit systems is crucial to providing a safer, more efficient transportation system, while improving the economic livelihood of the state and accommodating future growth. As travel on New Jersey's surface transportation system becomes more efficient and the physical condition of the state's roads, highways and bridges improves, personal and commercial productivity will increase, boosting economic development statewide.

New Jersey currently faces a transportation funding shortfall of \$35 billion over the next ten years. Without a significant commitment to transportation funding at the state and federal level, many needed projects and improvements can not move forward, jeopardizing New Jersey's future mobility and potential for economic development. Even with the added funding the state will receive through the federal economic stimulus package, many key projects remain unfunded at current transportation investment levels.

This report examines the condition, use, safety and funding of New Jersey's roads, bridges and public transit systems, as well as the state's ability to meet future mobility and traffic safety needs. Sources of information for this report include the U.S. Department of

Transportation (USDOT), the New Jersey Department of Transportation (NJDOT), the Federal Highway Administration (FHWA), the U.S. Census Bureau, the National Highway Traffic Safety Administration (NHTSA), the Reason Foundation and the Texas Transportation Institute (TTI). All data used is the latest available.

Population, Vehicle Travel and Congestion in New Jersey

Increases in the state's population and the rate of travel of its residents have created additional demand on New Jersey's transportation system. It is critical that New Jersey develop and maintain a modern transportation system that can accommodate future growth in population, vehicle travel and economic development.

New Jersey's population reached approximately 8.7 million in 2008, an increase of 12 percent and nearly one million people since 1990. New Jersey's population is expected to increase to 9.6 million by 2025, an increase of approximately 900,000 people.¹

From 1990 to 2006, annual vehicle miles of travel (VMT) in the state increased by 29 percent, from approximately 59 billion annual VMT to 76 billion VMT.² Although VMT dropped off in 2007 and 2008, likely due to rising fuel prices and the economic recession, travel in New Jersey is still expected to increase by another 30 percent by 2025, reaching approximately 99 billion VMT.³

New Jersey also has experienced significant economic growth since 1990. From 1990 to 2007, New Jersey's gross domestic product (GDP), a measure of the state's economic output, increased by 37 percent, when adjusted for inflation.⁴

Traffic congestion in New Jersey is a growing burden in key urban areas and threatens to impede the state's economic development. Congestion on New Jersey's urban highways is growing as a result of increases in vehicle travel and population. Over the past 10 years, the percentage of roadways that experience daily congestion for more than one hour a day has increased from 15 to 27.⁵

In 2007, 64 percent of New Jersey's urban highways were congested, carrying traffic volumes that result in significant rush hour delays.⁶ Highways that carry high levels of traffic are also more vulnerable to experiencing significant traffic delays as a result of accidents or other incidents.

Condition of New Jersey's Roads

The functional life of New Jersey's roads is greatly affected by the state's ability to perform timely maintenance and upgrades to ensure that structures last as long as possible.

Pavement failure is caused by a combination of factors, including traffic, moisture and climate, the materials used, and the quality of construction. Moisture often works its way into road surfaces and the materials that form the road's foundation. Road surfaces at intersections are even more prone to deterioration because the slow-moving or standing loads occurring at these sites subject the pavement to higher levels of stress. Because reconstructing roads costs approximately four times more than resurfacing them, it is critical that roads are fixed before they require major repairs.⁷

In 2007, 46 percent of major roads in New Jersey were rated deficient. These major roads are maintained by municipal, county and state governments. Roads rated deficient often have significant rutting, potholes or other visible signs of deterioration and typically need to be resurfaced or reconstructed. It is critical that roads are fixed before they require major repairs because reconstructing roads costs approximately four times more than resurfacing them.

A desirable goal for state and local organizations that are responsible for road maintenance is to keep 75 percent of major roads in good condition.⁸ In New Jersey, ten percent of the state's major roads were in good condition in 2007.⁹

Pavement smoothness is measured each year by the state using two scales. According to the International Roughness Index (IRI) smoother pavement will have a rating closest to zero, with the measurement increasing with the roughness of the pavement. The Present Serviceability Rating (PSR) assigns rough pavement a value closer to zero, with the score rising with the smoothness of the pavement being measured.

The Cost to Motorists of Roads in Inadequate Condition

TRIP has calculated the additional cost to motorists of driving on roads in poor or unacceptable condition. When roads are in poor condition, which may include potholes, rutting or rough surfaces, the cost to operate and maintain a vehicle increases. These additional vehicle operating costs include accelerated vehicle depreciation, additional vehicle repair costs, increased fuel consumption and increased tire wear. TRIP estimates that additional vehicle operating costs borne by New Jersey motorists as a result of poor road conditions is \$3.5 billion annually, or \$596 per motorist.

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.¹⁰

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 vehicle operating cost estimate is based on taking the average number of miles driven annually by a region's driver, calculating current vehicle operating costs based on AAA's 2008 vehicle operating costs and then using the HDM model to estimate the additional vehicle operating costs paid by drivers as a result of substandard roads.¹¹ Additional research on the impact of road conditions on fuel consumption by the Texas Transportation Institute (TTI) is also factored into TRIP's vehicle operating cost methodology.

Bridge Conditions in New Jersey

New Jersey's bridges form key links in the state's highway system, providing communities and individuals access to employment, schools, shopping and medical facilities, as

well as facilitating commerce and access for emergency vehicles. New Jersey's bridges are aging and deteriorating, and a significant number are in need of repair or replacement.

In 2008, approximately one third of New Jersey's bridges (20 feet or longer) were rated either structurally deficient or functionally obsolete.¹² Nearly 13 percent of the state's bridges were rated structurally deficient and 23 percent were rated functionally obsolete.

A bridge is structurally deficient if there is significant deterioration of the bridge deck, supports or other major components. Bridges that are structurally deficient 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 that are functionally obsolete no longer meet current highway design standards, often because of narrow lanes, inadequate clearances or poor alignment.

The overall condition of New Jersey's bridges is expected to worsen unless funding is increased. A 2008 report by the state's major transportation agencies found that if the state's recent level of funding for bridge repairs is not increased the number of deficient bridges will increase.¹³

The New Jersey Department of Transportation (NJDOT) provided the following list of the 40 most structurally deficient bridges in the state carrying at least 5,000 vehicles per day.

Chart 1. The 40 most structurally deficient bridges in New Jersey, carrying at least 5,000 vehicles per day.

	Route	Description	County	Daily Traffic
1	36	NJ 36 / SHREWSBURY RIVER & BAY AVENUE	MONMOUTH	21,746
2	4005	MORRIS AVE CR 651 OVER MORRISTOWN LINE	UNION	18,627
3	1+9T	RTE US 1+9T/ST PAUL&LARCH AVE&CONRAIL	HUDSON	44,600
4	6112	PARK AV/LEHIGH VALLEY MA	MIDDLESEX	17,390
5	3000	AMWELL RD(CR 514)/D & R CANAL	SOMERSET	15,900
6	139	RT. 139/ABANDONED ERIE LACKAWANNA RR	HUDSON	33,000
7	206	US 206 OVER CSXT	SOMERSET	19,020
8	139	NJ ROUTE 139 DEPRESSED ROADWAY	HUDSON	22,800
9	21	NJ 21 SB OVER NJ 21 NB VIADUCT	ESSEX	43,590
10	46	US46 OVER DL&WRR, W.BLKWL.ST&RIVR	MORRIS	26,700
11	52	ROUTE N.J. 52 OVER SHIP CHANNEL	CAPE MAY	24,160
12	139	NJ 139 EB - 12TH STREET VIADUCT	HUDSON	32,000
13	54	NJ ROUTE 54 / NJ TRANSIT & HOSPITALITY BROOK	ATLANTIC	11,610
14	35	NJ 35 / PERTH AMBOY CONNECTOR	MIDDLESEX	24,200
15	3	NJ3EB/HACKENSACK RVR & MEADOWLND PKWY	BERGEN	79,250
16	206	RT US 206 OVER CRUSERS BROOK	SOMERSET	19,700
17	4005	ROSEVILLE AVE./MORRISTOWN LINE	ESSEX	9,426
18	27	RT27(MIDDLESEX AVE)/PORT	MIDDLESEX	22,372
19	6112	OLD BRIDGE TPK CO.527/SAYREVILLE SEC	MIDDLESEX	14,876
20	22	US 22 / CHESTNUT ST (CR 626)	UNION	95,500
21	27	NJ ROUTE 27 OVER SIX MILE RUN	MIDDLESEX	39,685
22	33	ROUTE 33 OVER BORDENTOWN SECONDARY	MERCER	10,300
23	6112	GROVE AV.OVER PORT READING SECONDARY	MIDDLESEX	191,530
24	3000	LANDING LANE (CO.609) OVER D&R CANAL	MIDDLESEX	19,380
25	50	ROUTE 50 OVER TUCKAHOE RIVER	CAPE MAY	9,550
26	4005	NESBITT ST. OVER MORRISTOWN LINE	ESSEX	11,450
27	130	US RT.130 OVER CRAFTS CREEK	BURLINGTON	25,900
28	6011	NORTH OLDEN AVENUE OVER AMTRAK.	MERCER	25,603
29	6011	EAST STATE STREET OVER AMTRAK	MERCER	5,144
30	4005	CLIFTON AVE / MORRISTOWN LINE	ESSEX	17,933
31	52	RT52 OVER BEACH THOROFARE	CAPE MAY	24,160
32	7	WITTPENN-RTE 7 OVER HACKENSACK R	HUDSON	20,000
33	5	NJ RT 5 OVER DELIA AVE	BERGEN	17,275
34	23	ROUTE NJ 23 OVER BRANCH OF WALLKILL RIVER	SUSSEX	17,128
35	31	RT 31 OVER RARITAN VALLEY LINE	HUNTERDON	22,560
36	28	NJ 28 OVER GREEN BROOK	SOMERSET	22,822
37	1	US ROUTE 1 OVER CONRAIL (ABANDONED)	MIDDLESEX	66,823
38	4005	PROSPECT ST(CR513)OVER MORRISTOWN LINE	MORRIS	19,529
39	1+9	US 1&9(TONNELE AV)/SUSQU CONN-CONRAIL	HUDSON	64,626
40	202	US202 OVER N BR RARITAN RIVER	SOMERSET	9,890

Source: New Jersey Department of Transportation

New Jersey's high level of bridge deterioration is a sign of the age of the state's bridges. At present, 15 percent of state bridges, 31 percent of county/municipal bridges, 59 percent of NJ TRANSIT bridges and 38 percent of private bridges are older than 75 years. While the average

design life expectancy of a new bridge is 75 years, many older bridges were built with a life expectancy of only 50 years. The average age of bridges in New Jersey is 49 years.

Traffic Safety in New Jersey

A total of 3,722 people were killed in motor vehicle crashes in New Jersey from 2003 through 2007, an average of 744 fatalities per year.¹⁴ New Jersey's traffic fatality rate of 0.95 fatalities per 100 million vehicle miles of travel in 2007 is below the national average of 1.36.¹⁵

Chart 2. Traffic fatalities in New Jersey from 2003 – 2007.

Year	Fatalities
2003	747
2004	731
2005	748
2006	772
2007	724

Source: National Highway Traffic Safety Administration.

In 2008, the number of fatalities dropped to 594, the lowest number in 50 years.¹⁶ The New Jersey Department of Transportation continues to make efforts to further reduce serious traffic crashes in the state, which cause, in addition to fatalities, approximately 75,000 injuries and 300,000 crashes per year.¹⁷ The economic cost alone of these crashes is estimated at \$9 billion annually, which includes medical costs and lost productivity.¹⁸

Three major factors are associated with fatal vehicle crashes: driver behavior, vehicle characteristics and roadway design. An analysis of national traffic crash statistics indicates that the design of roadways is a factor in approximately 30 percent of these crashes.

Improving safety on New Jersey’s roads and highway system 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.

Where appropriate, roadway improvements such as adding turn lanes, removing or shielding obstacles, adding or improving medians, widening lanes, widening and paving shoulders, improving intersection layout, providing better road markings, and upgrading or installing traffic signals could reduce the severity of serious traffic crashes. The Federal Highway Administration has found that every \$100 million spent on needed highway safety improvements will result in 145 fewer traffic fatalities over a 10-year period.¹⁹

Roads with poor geometry, with insufficient clear distances, without turn lanes, with inadequate shoulders for the posted speed limits, or poorly laid out intersections or interchanges, pose greater risks to motorists, pedestrians and bicyclists.

The following chart shows the correlation between specific needed road improvements and the reduction of fatal accident rates nationally.²⁰

Chart 3. Reduction in fatal accident rates after roadway improvements

Type of Improvement	Reduction in Fatal Accident Rates after Improvements
New Traffic Signals	53%
Turning Lanes and Traffic Signalization	47%
Widen or Modify Bridge	49%
Construct Median for Traffic Separation	73%
Realign Roadway	66%
Remove Roadside Obstacles	66%
Widen or Improve Shoulder	22%

Source: TRIP analysis of U.S. Department of Transportation data

Importance of Transportation to Economic Growth

Known as the Crossroads of the East because of its central location in the U.S. Northeast, New Jersey relies on an efficient transportation system to support economic development in the state. Reliable transportation access is critical to the health of several industries in New Jersey, including manufacturing, chemical, energy, distribution, agriculture and tourism.

The new culture of business demands that a region have well-maintained and efficient roads, highways and bridges if it wants to remain economically competitive. The advent of modern national and global communications and the impact of free trade in North America and elsewhere have resulted in a significant increase in freight movement. Consequently, the quality of a region's transportation system has become a key component in a business's ability to compete locally, nationally and internationally.

Businesses have responded to improved communications and the greater necessity to cut costs with a variety of innovations including just-in-time delivery, increased small package delivery, demand-side inventory management, and by accepting customer orders through the Internet. The result of these changes has been a significant improvement in logistics efficiency as businesses move away 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 the Garden State. 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.

An analysis of commodity transport by the U.S. Bureau of Transportation Statistics (BTS) and U.S. Census Bureau underscored the economic importance of New Jersey's road system. The BTS report found \$287 billion in goods are shipped annually from sites in New Jersey and another \$267 billion in goods are shipped to sites in New Jersey, mostly by commercial trucks on the state's highways.²¹ Seventy-three percent of the goods shipped annually from sites in New Jersey are carried by trucks and another 19 percent are carried by courier services, which use trucks for part of the deliveries. Similarly, 74 percent of the goods shipped to sites in New Jersey are carried by trucks and another 14 percent are carried by courier services.²²

Trucking is a crucial part of New Jersey's economy, as commercial trucks move goods from sites across the state to markets inside and outside the state. Commercial truck travel in the state is expected to increase significantly over the next two decades. Based on federal projections, TRIP estimates that commercial trucking will increase by 26 percent in New Jersey between 2009 and 2020.²³

Transportation Funding in New Jersey

New Jersey's leading transportation agencies are required to prepare an annual, comprehensive analysis of the current and future conditions and funding needs of the state's surface transportation system. The report is prepared by the New Jersey Department of

Transportation, NJ Transit, the New Jersey Turnpike Authority, the South Jersey Transportation Authority and the state's three metropolitan planning organizations. The current report, "FY 2009-2018 Statewide Capital Investment Strategy," found that New Jersey faces significant, long-term transportation challenges. The report concluded that over the next ten years, New Jersey faces an estimated transportation funding shortfall of \$35 billion.²⁴

According to the report, approximately \$70 billion will be needed from 2009 to 2018 to improve road and bridge conditions, mitigate congestion, increase highway safety and improve New Jersey's public transit system.²⁵ However, based on current funding projections, only \$35 billion will be available during that time, leaving a shortfall of \$35 billion.²⁶ Numerous projects needed to maintain and expand the current transportation system will not be able to move forward without a significant, long-term boost in funding at the state or federal level.

The recently approved economic stimulus package (the American Recovery and Reinvestment Act) will offer a significant, short-term boost in transportation funding in New Jersey by providing \$652 million for road and bridge improvements and \$424 million for the state's public transit system. However, this funding will not be sufficient to allow the state to proceed with needed long-term projects that will improve safety, reduce congestion and expand capacity. According to the recently released NJDOT report FY 2009-2018 Statewide Capital Investment Strategy, "as needs continue to grow and revenue is expected to remain limited, the ability to improve the performance of New Jersey's transportation system and achieve statewide transportation goals and objectives becomes a monumental challenge."²⁷

Without a significant, long-term increase in transportation funding, road and bridge conditions will continue to deteriorate, congestion will worsen, and the condition of the state's public transportation system will decline.

The escalating cost of transportation improvements has further exacerbated New Jersey's funding shortfall. The average cost of key materials used for highway and bridge construction – including asphalt, concrete, steel, lumber and diesel – increased by 40 percent over the five-year period from March 2004 to March 2009.

Making needed repairs to the state's transportation system can help boost New Jersey's economy. A 2007 analysis by the Federal Highway Administration found that every \$1 billion invested in highway construction would support approximately 27,800 jobs, including approximately 9,500 in the construction sector, approximately 4,300 jobs in industries supporting the construction sector, and approximately 14,000 jobs in non-construction related sectors of the economy.

Future Federal Surface Transportation Program

To ensure that federal funding for highways and public transit in New Jersey and throughout the nation continues beyond the expiration of the current federal surface transportation program, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), Congress will need to approve new long-term federal surface transportation legislation by September 30, 2009.

Two congressionally appointed commissions and a national organization representing state transportation departments have recommended a broad overhaul of the Federal Surface Transportation Program to improve mobility, safety and the physical condition of the nation's

surface transportation system by significantly boosting funding, consolidating the program into fewer categories, speeding up project delivery and requiring greater accountability in project selection.

The National Surface Transportation Policy and Revenue Study Commission (NSTPRSC) and the National Surface Transportation Infrastructure Financing Commission (NSTIFC) were created by Congress to examine the current condition and future funding needs of the nation's surface transportation program, develop a plan to insure the nation's surface transportation system meets America's future mobility needs and to recommend future funding mechanisms to pay for the preservation and improvement of the nation's roads, highways, bridges and public transit systems.

The NSTPRSC concluded that it is critical to the future quality of life of Americans that the nation create and sustain the preeminent surface transportation system in the world, one that is well-maintained, safe and reliable.

The NSTIFC found that the U.S. faces a \$2.3 trillion funding shortfall over the next 25 years in maintaining and making needed improvements to the nation's surface transportation system. The NSTIFC also found that the use of motor fuel fees is not sustainable as a primary source of funding for the nation's surface transportation system because of the shift to a variety of fuel sources and more fuel efficient vehicles.

The American Association of State Highway and Transportation Officials (AASHTO) proposal for authorization of the federal surface transportation program calls for approval of a program that would be accountable for results, would make investments based on community needs and would deliver projects on time and on budget.

The AASHTO proposal calls for a federal surface transportation program that is based on state-driven performance measures and is focused on six objectives of national interest: preservation and renewal, interstate commerce, safety, congestion reduction and connectivity for urban and rural areas, system operations, and environmental protection

Conclusion

New Jersey faces a significant challenge in the need to modernize and improve its highway and transit system. The state's system of roads, highways, bridges and public transit play a central role in the Garden State's economy. Meeting New Jersey's goals for sound economic growth, a high standard of living and strong economic progress will require the state to build and maintain a modern highway and public transit system.

Making needed improvements to New Jersey's surface transportation system could 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.

The federal stimulus package has provided a helpful down payment for the improvement of New Jersey's surface transportation system. However, without a substantial, long term boost in state or federal highway funding, numerous projects to improve the condition and expand the capacity of New Jersey's roads, bridges and highways will not be able to proceed, hampering the state's ability to improve the condition of its transportation system and to enhance economic development opportunities in the state.

Endnotes

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- ¹ U.S. Census Bureau, Population Division, Interim State Population Projections, 2005.
- ² U.S. Department of Transportation - Federal Highway Administration: Highway Statistics 2007.
- ³ TRIP estimate based on analysis of FHWA data.
- ⁴ TRIP analysis of data from the U.S. Bureau of Economic Analysis. The nation's Gross Domestic Product has been adjusted for inflation based on the Consumer Price Index.
- ⁵ New Jersey Department of Transportation. 2009. Communication with TRIP.
- ⁶ U.S. Department of Transportation - Federal Highway Administration: Highway Statistics 2007
- ⁷ Selecting a Preventative Maintenance Treatment for Flexible Pavements. R. Hicks, J. Moulthrop. Transportation Research Board. 1999. Figure 1.
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- ²⁶ Ibid. P. 3.
- ²⁷ Ibid.