

TRIP Reports: INCREASED NORTH DAKOTA TRANSPORTATION FUNDING HAS ALLOWED LOCAL GOVERNMENTS TO BEGIN ADDRESSING TRANSPORTATION NEEDS

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MAINTAINING AND IMPROVING ROAD & BRIDGE CONDITIONS, SAFETY & RELIABILITY WILL BE A CHALLENGE UNDER CURRENT FUNDING LEVELS



While recent increases in state transportation funding have started to provide local governments in North Dakota some assistance in addressing their transportation needs, the state will face challenges in maintaining and improving road and bridge conditions, safety and reliability without additional transportation funding. Increased investment in transportation improvements at the local, state and federal levels could improve road and bridge conditions, boost safety, ease congestion and improve reliability, and support long-term economic growth in North Dakota, according to a new report released today by TRIP, a Washington, DC based national transportation research nonprofit.

According to the TRIP report, "Keeping North Dakota Moving Forward: Progress and Challenges in Providing a Modern Surface Transportation System," the increased transportation funding provided to local governments by the state legislature's passage of HB 1066 "Operation Prairie Dog" in 2019 has started to provide some assistance to local governments in addressing their transportation needs. But, at its current level of transportation investment, North Dakota will be challenged to maintain and improve current road and bridge conditions, safety and reliability. The TRIP report finds that nearly half of North Dakota's major locally and statemaintained urban roads are in poor condition, one in ten locally and statemaintained bridges (20 feet or more in length) are rated poor/structurally deficient, and 564 people lost their lives on the state's roads from 2015-2019.

Some of North Dakota's major urban roads are congested, causing delays and choking commuting and commerce.

Forty-four percent of North Dakota's major locally and state-maintained urban roads are in poor condition, 33 percent are in fair condition, and the remaining 23 percent are in good condition. Driving on deteriorated roads costs North Dakota's drivers an average of \$410 each year – \$230 million statewide – in extra vehicle operating costs, including accelerated vehicle depreciation, additional repair costs, and increased fuel consumption and tire wear.

Ten percent of North Dakota's bridges are rated in poor/structurally deficient condition. Bridges that are rated poor/structurally deficient have significant deterioration of the bridge deck, supports or other major components. Thirty-six percent of the state's bridges are rated in fair condition and the remaining 54 percent are in good condition. 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 North Dakota, 46 percent of the state's bridges were built in 1969 or earlier. "Counties and county officials were very pleased with the thoroughness of the TRIP report," said Terry Traynor, executive director of the North Dakota Association of Counties. "It provides research-based conclusions regarding the gap between existing and needed funding that are consistent with our understanding of the statewide situation. The report's focus on safety in conjunction with roadway and bridge conditions is critically important." Traffic crashes in North Dakota claimed the lives of 564 people from 2015 to

2019. While the state's overall 2019

traffic fatality rate of 1.02 fatalities for

every 100 million miles traveled is below the national average of 1.11, the fatality rate on North Dakota's non-interstate rural roads is approximately triple that of all other roads in the state (1.49 per 100 million vehicle miles of travel vs. 0.48). Improving safety on North Dakota'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 financial impact of traffic crashes in which the lack of adequate roadway safety features, while not the primary cause, were likely a contributing factor was \$788 million annually in North Dakota.

"The TRIP report demonstrates the need for increased and continued investment in North Dakota's transportation system, particularly our network of rural roads and bridges, which provide a vital link for the state's agricultural, energy extraction and tourism sectors and keep our economy moving in the right direction," said Arik Spencer, president and CEO of the North Dakota Chamber.

Congested roads and bottlenecks choke commuting and commerce and cost North Dakota drivers a total of \$140 million each year in the form of lost time and wasted fuel - an average of \$331 annually per driver in Bismarck. Due to the Covid-19 pandemic, vehicle travel in North Dakota dropped by as much as 32 percent in April 2020 (as compared to vehicle travel during the same month the previous year) but rebounded to seven percent below the previous year's volume in January 2021. While traffic congestion is largely constrained to the state's urban areas, seasonal load restrictions on some highways due to a lack of adequate load carrying capacity can also increase congestion by requiring trucks to reduce

their weight and make additional trips, which results in additional truck traffic. The TRIP report identifies the most congested locations on North Dakota highways.

"The North Dakota Transportation Coalition continues to advocate and educate policymakers about the everincreasing funding gap in our state's needs and where infrastructure funding exists today – and the legislation that could help fill that gap," said Scott Meske, spokesperson for the North Dakota Transportation Coalition. "Our state is fortunate to have access to various sources of short-term funding options. However, the challenge is to structure our funding sources to meet the long-term needs of our state's roads, bridges and streets."

The efficiency and condition of North Dakota's transportation system, particularly its highways, is critical to the health of the state's economy. Annually, \$199 billion in goods are shipped to and from North Dakota, relying heavily on the state's network of roads and bridges. 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. Approximately 215,000 full-time jobs in North Dakota 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."It is critical that North Dakota builds on the steps taken in 2019 to boost available transportation funding to ensure the state moves forward with a robust and reliable transportation plan capable of improving mobility and accessibility, which is vital to the state's residents, businesses and visitors," said Dave Kearby, TRIP's executive director.

Keeping North Dakota Moving Progress and Challenges in Providing a Modern Surface Transportation System



Executive Summary

Accessibility and connectivity are critical factors in a state's quality of life and economic competitiveness. The growth and development of a state or region hinges on efficient and safe access to employment, customers, commerce, recreation, education and healthcare via multiple transportation modes. The quality of life of North Dakota's residents and the pace of the state's economic growth is directly tied to the condition, efficiency, safety and resiliency of its transportation system.



An adequate and reliable source of transportation funding is critical to providing the system of roads, highways and bridges that can support commerce within North Dakota and connect the state to markets around the globe, while providing the safe, smooth and efficient mobility that residents require. The increased transportation funding provided to local governments by the state legislature's passage of HB 1066 "Operation Prairie Dog" in 2019 has started to provide some assistance to local governments in addressing their transportation needs. But, at its current level of transportation investment, North Dakota will be challenged to maintain and improve current road and bridge conditions, safety and reliability. TRIP's "Keeping North Dakota Moving Forward" report examines the condition, use, safety and efficiency of North Dakota's surface transportation system; the impact of the 2019 boost in state transportation investment; and, the importance of reauthorization of the federal surface transportation program. Sources of information for this

report include the North Dakota
Department of Transportation (NDDOT),
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).

NORTH DAKOTA'S TRANSPORTATION SYSTEM AND FUNDING

To address a lack of adequate infrastructure funding for local governments, in 2019, the North Dakota state legislature passed House Bill 1066, dubbed Operation Prairie Dog, which implemented changes to oil and gas production taxes and allocated up to \$125 million per year to city, county and township infrastructure investment. By November 2020, approximately \$44 million has been distributed to local governments for infrastructure investment.



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The ability of revenue from North Dakota's motor fuel tax – a critical source

of state transportation funds – to keep pace with the state's future transportation needs is likely to erode as a result of increasing vehicle fuel efficiency and the increasing use of electric vehicles. The average fuel efficiency of U.S. passenger vehicles increased from 20 miles per gallon in 2010 to 24.5 miles per gallon in 2020. Average fuel efficiency is expected to increase another 31 percent by 2030. to 32 miles per gallon, and increase 51 percent by 2040, to 37 miles per gallon. The share of electric vehicles of total passenger vehicle sales in the U.S. is expected to increase to five percent by 2023 and to 60 percent by 2040, by which time electric vehicles will represent approximately 30 percent of the passenger vehicle fleet.

The current federal transportation legislation, Fixing America's Surface Transportation Act (FAST Act), was set to expire on September 30, 2020. Congress extended it by one year to September 30, 2021. The FAST Act is a major source of funding for road, highway and bridge repairs in North Dakota. Throughout the FAST-Act - fiscal years 2016 to 2021 the program provided \$1.6 billion to North Dakota for road repairs and improvements, an average of \$264 million per year. From 2014 to 2018, the federal government provided \$1.29 for road improvements in North Dakota for every \$1.00 state motorists paid in federal highway user fees, including the federal state motor fuel tax.

From 2014 to 2018, federal funds provided for highway improvements were the equivalent of 45 percent of the amount of North Dakota state capital outlays on road, highway and bridge projects, including construction, engineering and right-of-way acquisition.

ROAD CONDITIONS IN NORTH DAKOTA

Forty-four percent of North Dakota's major locally and state-maintained urban roads are in poor condition, 33 percent are in fair condition, and the remaining 23 percent are in good condition. Three percent of North Dakota's major locally and state-maintained rural roads are in poor condition, 25 percent are in fair condition, and the remaining 72 percent are in good condition.



1.11. The fatality rate on North Dakota's non-interstate rural roads is approximately triple that of all other roads in the state (1.49 per 100 million vehicle miles of travel vs. 0.48). Improving safety on North Dakota'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.

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Location	Poor	Fair	Good	VOC
Bismarck	34%	40%	26%	\$764
Fargo	26%	39%	35%	\$630

NORTH DAKOTA

Driving on rough roads costs North Dakota's drivers an average of \$410 each annually, a total of \$230 million statewide. The chart below details pavement conditions on major urban roads in the state's largest urban areas and the average annual additional Vehicle Operating Costs (VOC) per regional driver as a result of driving on rough roads.

BRIDGE CONDITIONS IN NORTH DAKOTA

Ten percent of North Dakota's bridges are rated in poor/structurally deficient condition. Bridges that are rated poor/structurally deficient have significant deterioration of the bridge deck, supports or other major components. Thirty-six percent of the state's bridges are rated in fair condition and the remaining 54 percent are in good condition. 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 North Dakota, 46 percent of the state's bridges were built in 1969 or earlier. The chart below details bridge conditions statewide and in the state's largest urban areas.

Year	Statewide Fatalities	
2015	131	
2016	113	
2017	115	
2018	105	
2019	100	
TOTAL	564	
AVERAGE	113	

Urban Area Hours Lost Congestion Cost Bismarck 17 \$331 Fargo 17 \$321

TRAFFIC SAFETY IN NORTH DAKOTA

From 2015 to 2019, 564 people were killed in traffic crashes in North Dakota. The state's 2019 traffic fatality rate of 1.02 fatalities for every 100 million miles traveled is below the national average of SHIPPED TO AND FROM SITES IN NORTH DAKOTA IS EXPECTED TO INCREASE 58% BY 2045 128% FOR GOODS SHIPPED BY TRUCKS

THE VALUE OF FREIGHT

Traffic crashes in North Dakota imposed a total of \$788 million in economic costs in 2019.

TRAFFIC CONGESTION IN NORTH **DAKOTA**

Congested roads and bottlenecks choke commuting and commerce and cost North Dakota drivers \$140 million each vear in the form of lost time and wasted fuel. Due to the Covid-19 pandemic, vehicle travel in North Dakota dropped by as much as 32 percent in April 2020 (as compared to vehicle travel during the

same month the previous year) but rebounded to seven percent below the previous year's volume in January 2021. The chart below details the annual hours lost to congestion and congestion costs per driver in the state's largest urban areas.

While traffic congestion is largely constrained to the state's urban areas. seasonal load restrictions on some highways due to a lack of adequate load carrying capacity can also increase congestion by requiring trucks to reduce their weight and make additional trips. which results in additional truck traffic. Traffic congestion hampers the state's ability to support economic development and quality of life by reducing the reliability and efficiency of personal and commercial travel, including the transport of goods and services. Traffic congestion robs commuters of time and money and imposes increased costs on businesses, shippers and manufacturers, which are often passed along to consumers. Increased levels of congestion can also reduce the attractiveness of a location when a company is considering expansion or deciding where to locate a new facility. The chart below lists the most congested locations on North Dakota highways.

FREIGHT TRANSPORTATION AND THE IMPACT OF TRANSPORTATION INVESTMENT ON ECONOMIC GROWTH IN NORTH DAKOTA

The health and future growth of North Dakota's economy is riding on its surface transportation system. North Dakota's agricultural sector relies heavily on the state's transportation network to ship crops and livestock to market. Each year, \$199 billion in goods are shipped to and from sites in North Dakota. Twenty percent of all travel on North Dakota interstate highways is by large combination trucks.

The amount of freight transported in North Dakota and the rest of the U.S. is expected to increase significantly as a result of further economic growth, changing business and retail models, increasing international trade, and rapidly changing consumer expectations that place an emphasis on faster deliveries, often of smaller packages or payloads. The value of freight shipped to and from sites in North Dakota, in inflation-adjusted dollars, is expected to increase 58 percent by 2045 and by 128 percent for goods shipped by trucks, placing an increased burden on the state's network of roads and bridges. Accommodating the significant increase

expected in the movement of freight by trucks in North Dakota will be further challenged by the significant number of freight routes in North Dakota that are constrained because the roads have inadequate load carrying capacity to

accommodate large trucks.

According to a report by the American Road & Transportation Builders
Association, the design, construction and maintenance of transportation infrastructure in North Dakota support approximately 13,258 full-time jobs across all sectors of the economy. These workers earn \$667 million annually. Approximately 215,000 full-time jobs in North Dakota in key industries like tourism, retail sales, agriculture and manufacturing are completely dependent on the state's transportation network.

Sources of information for this report include the Federal Highway Administration (FHWA), the North Dakota Department of Transportation (NDDOT), the American Association of State Highway and Transportation Official (AASHTO), the American Road and Transportation Builders Association (ARTBA), the Bureau of Transportation Statistics (BTS), the U. S. Census Bureau, the Center for Transportation Studies, the Texas Transportation Institute (TTI) and the National Highway Traffic Safety Administration (NHTSA). All data used in the report are the most recent available.

County	Urban Area	Congested Locations	
Burleigh	Bismarck	I-94 Exit 159 (State Street/US 83)	
Grand Forks	Grand Forks	I-29 47th Avenue (Future Interchange)	
Morton	Mandan	I-94 Exit 152 (Sunset Drive)	
Stark	Dickinson	I-94 Exit 61 (ND 22)	
Burleigh/Morton	Bismarck/Mandan	I-94 Grant Marsh Bridge	
Morton	Mandan	I-94 Midway	
Burleigh	Bismarck	I-94 Exit 161 (I-94 East Business Loop)	
Cass	Fargo	I-29 (64th Avenue South Structure)	
Stutsman	Jamestown	I-94 Exit 257 (Jamestown Separation)	
Burleigh	Bismarck	State St (Calgary to 57th Ave N)	
Burleigh	Bismarck	Expressway (River to Railroad Overpass)	
Burleigh	Bismarck	US 83 & 71st Ave	
Stark	Dickinson	ND 22 RR Underpass	
Cass	Fargo	Main Ave (University to 25th St)	
Cass	Fargo	19th Ave N (I-29 to University)	
Grand Forks	Grand Forks	DeMers Ave & 42nd St	
Grand Forks	Grand Forks	32nd Ave S (I-29 to Washington St)	
Grand Forks	Grand Forks	Washington St & Gateway Dr	
Grand Forks	Grand Forks	Washington St & DeMers Ave	
Morton	Mandan	Memorial Highway	
Ward	Minot	S Broadway (19th Ave SW to south city limits)	
Williams	Williston	US 2 and 26th Street Intersection	
Burleigh	Bismarck	43rd Ave (State St to 26th St)	
Burleigh/Morton	Bismarck/Mandan	Beltway	
Burleigh/Morton	Bismarck/Mandan	Northern Bridge	
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NORTH DAKOTA		nderpass	

EVERY YEAR, \$199 BILLION IN GOODS ARE SHIPPED TO AND FROM SITES IN NORTH DAKOTA



Oth Ave S to 52nd Ave S)