MONTANA TRANSPORTATION BY THE NUMBERS:

Meeting the State's Need for Safe, Smooth and Efficient Mobility

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TRIP
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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 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

Ten Key Transportation Numbers in Montana

$874 million	The Montana Department of Transportation (MDT) estimates it will face an $874 million average annual shortfall through 2021 in the investment level needed to make further progress in improving road, highway and bridge conditions; improving traffic safety; and, completing needed modernization improvements to enhance economic development opportunities.
50	This report includes information on 50 road, highway and bridge projects that currently cannot proceed due to lack of funding. These projects are needed to improve safety, support economic development opportunities and improve conditions in Montana.
$144.5 million	The MDT has delayed $144.5 million in road projects that had been scheduled to begin in 2017 because of a lack of adequate funding.
32 percent **5th** **25 percent**	Vehicle miles traveled (VMT) in Montana increased by 32 percent from 2000 to 2015 –from 9.9 billion VMT in 2000 to 13 billion VMT in 2015. This was the fifth largest increase in VMT in the nation during that time. VMT in Montana is anticipated to increase by another 25 percent by 2030.
$794 million	Driving on deficient roads costs Montana motorists a total of $794 million annually in the form of additional vehicle operating costs (VOC), congestion-related delays and traffic crashes.
$1,113 – Billings **$1,417– Great Falls** **$1,152 – Missoula**	TRIP has calculated the cost to the average motorist in the form of additional VOC, congestion-related delays and traffic crashes. Driving on deficient roads costs the average Billings urban area driver $1,113 annually, while the average driver in the Great Falls area loses $1,417 and the average driver in the Missoula area loses $1,152.
1.58 **3rd**	Montana's overall traffic fatality rate of 1.58 fatalities per 100 million vehicle miles of travel in 2014 was the third highest in the U.S. and much higher than the national average of 1.08.
34% - Montana **30% - Billings** **52% - Great Falls** **26% – Missoula**	Thirty-four percent of Montana's major urban roads are in poor condition. In the Billings, Great Falls and Missoula urban areas, 30 percent, 52 percent and 26 percent of major roads are in poor condition, respectively.
$101 Billion	Annually, $101 billion in goods are shipped to and from sites in Montana, mostly by truck.
18%	A total of 18 percent of Montana bridges show significant deterioration or do not meet current design standards. Eight percent of the state's bridges are structurally deficient and ten percent are functionally obsolete.

Executive Summary

Nine years after the nation suffered a significant economic downturn, Montana's economy continues to rebound. The rate of economic growth in Montana, which is greatly impacted by the reliability and condition of the state's transportation system, has a significant impact on quality of life in the Treasure State.

An efficient, safe and well-maintained transportation system provides economic and social benefits by affording individuals access to employment, housing, healthcare, education, goods and services, recreation, entertainment, family, and social activities. It also provides businesses access to suppliers, markets and employees, all critical to a business' level of productivity and ability to expand. Reduced accessibility and mobility - as a result of traffic congestion, a lack of adequate capacity, or deteriorated roads, highways, bridges and transit facilities - diminishes a region's quality of life by reducing economic productivity and limiting opportunities for economic, health or social transactions and activities.

With an economy based largely on natural resource extraction, agriculture, manufacturing and tourism, the quality of Montana's transportation system plays a vital role in the state's economic growth and quality of life.

In this report, TRIP looks at the top transportation numbers in Montana as the state addresses modernizing and maintaining its system of roads, highways, bridges and transit.

STATE TRANSPORTATION FUNDING IN MONTANA

Based on current funding, MDT estimates it will face a funding shortfall of nearly $900 million each year through 2021. While the state will be able to address some needed projects with existing funding, numerous needed projects will not move forward at least through 2022.

- The Montana Department of Transportation (MDT) estimates it would need $1.46 billion annually to allow the state to make further progress in improving road, highway and bridge conditions; enhance traffic safety; and, make further modernization and capacity improvements to support economic development and quality of life.

- Despite those needs, MDT estimates it will face a funding shortfall averaging $874 million each year through 2021. And, while MDT funding is projected to increase slightly from 2016 to 2017, reaching $609 million in 2017, projected funding for 2018 through 2021 will be well below 2017 levels.

MDT Proposed Funding	2016	FFY 2017	FFY 2018	FFY 2019	FFY 2020	FFY 2021
Capital Investment	$ 375,686,967	$ 373,222,792	$ 345,940,949	$ 349,323,661	$ 373,732,051	$ 380,556,304
Local Investment	$ 58,589,935	$ 69,948,975	$ 66,552,620	$ 61,909,911	$ 43,873,971	$ 50,812,034
Local Fuel Tax Allocation	$ 16,766,000	$ 16,766,000	$ 16,766,000	$ 16,766,000	$ 16,766,000	$ 16,766,000
Facilities	$ 5,914,049	$ 4,746,721	$ 6,503,065	$ 5,000,000	$ 5,000,000	$ 5,000,000
Maintenance	$ 9,678,876	$ 10,112,360	$ 10,112,360	$ 10,112,360	$ 10,112,360	$ 10,112,360
State Funded Maintenance	$ 131,914,914	$ 134,123,096	$ 126,595,857	$ 127,511,020	$ 127,511,020	$ 127,511,020
Total	**$ 598,550,742**	**$ 608,919,943**	**$ 572,470,850**	**$ 570,622,951**	**$ 576,995,402**	**$ 590,757,718**
	Annual transportation funding shortfall, assuming $1,460,000,000 in annual needs					
	$ 861,449,258	$ 851,080,057	$ 887,529,150	$ 889,377,049	$ 883,004,598	$ 869,242,282

- The MDT has delayed $144.5 million in road projects that had been scheduled to begin in 2017 because of a lack of adequate funding.

- Based on current levels of state funding, the following preservation or reconstruction projects are either underway, completed in 2016, or will be underway or completed no later than 2021.

Project Name/Location	Scope	Route	Length (miles)
S FK FLATHEAD - HUNGRY HORSE	BRIDGE REPLACEMENT	N-1	1
HUSON-EAST	RECONSTRUCTION	S-574	11
SWAMP CREEK-EAST	RECONSTRUCTION	N-1	5
FRENCHTOWN - E & W	REHAB - MAJOR	I-90	20
US 93 N - POST CREEK HILL	RECONSTRUCTION	N-5	3
RARUS/SILVER BOW CR STRUCTURES	BRIDGE REPLACEMENT	I-15	1
STONE CREEK - NORTH	RECONSTRUCTION	N-49	7
WHITEHALL-SOUTH	RECONSTRUCTION	P-55	12
SOUTH OF BOULDER-SOUTH	RECONSTRUCTION	S-399	15
YELLOWSTONE PARK	REHAB	N-50	21
EMERSON JCT - MANCHESTER	REHAB - MAJOR	I-15	4
WOLF CREEK - N & S	REHAB - MAJOR	I-15	7
KIOWA JCT - N & S	RECONSTRUCTION	P-58	5
GALATA-E&W	RECONSTRUCTION	N-1	8
BYNUM - SOUTH	RECONSTRUCTION	P-3	6
CULBERTSON - EAST	RECONSTRUCTION	N-1	11
ROSEBUD CO LINE - EAST	RECONSTRUCTION	P-14	11
BAINVILLE - SOUTH	RECONSTRUCTION	S-327	14
BR DECK, TERRY-FALLON AREA	BRIDGE DECK	I-94, X-81020	39
SIDNEY TO FAIRVIEW	OVERLAY	N-20	10
LAVINA - SOUTH	RECONSTRUCTION	N-53	6
HOBSON - EAST	RECONSTRUCTION	N-57	7
MISSOURI RIVER BRIDGE (US-191)	BRIDGE REHAB	N-61	0
27TH ST-1ST AVE S TO AIRPORT	MILL & FILL	N-53	3
TWO DOT - WEST	RECONSTRUCTION	P-14	5

- Based on current levels of state funding, the following capacity expansion or safety projects are either underway, completed in 2016, or will be underway or completed no later than 2021.

Project Name/Location	Scope	Route	Length (miles)
SF 119-SLOPE FLATTEN S-206	SLOPE FLATTENING	S-206	9
RONAN - NORTH	RECONSTRUCTION	N-5	1
RUSSELL ST - IDAHO TO DAKOTA	RECONSTRUCTION	U-8105	0
RUSSELL ST-BROADWAY TO IDAHO	RECONSTRUCTION	U-8105	0
SF149 S OF STEVENSVLL SFTY IMP	MEDIAN AND SHOULDERS	S-269	6
TOSTON STRUCTURES (US-287)	BRIDGE REPLACEMENT	N-8	3
BELGRADE-SOUTH	RECONSTRUCTION	N-85	3
ROUSE-OAK/STORY MILL-BOZEMAN	RECONSTRUCTION	P-86	1
JCT S-437 - N & S	RECONSTRUCTION	N-8	6
SF 129 -SLOPE FLTTNNG BELGRADE	SLOPE FLATTENING	P-205	2
BELT - N & S - PHASE 3	RECONSTRUCTION	N-60, N-57	3
LOHMAN-E&W	RECONSTRUCTION	N-1	10
SF 119-JCT S-279/S-231	INT IMPROVEMENTS	S-279	1
CAPITOL INTCH/CEDAR INTCH/HLNA	BRIDGE REPLACE W/ADDED	I-15	1
SF 149 - YORK RD ROUNDABOUT	INT IMPROVEMENTS	S-280	0
BROADUS INTCHG - MILES CITY	INTERCHANGE	I-94	0
EAST HOLLY STREET - SIDNEY	REHAB - MAJOR	U-10408	1
SF 139-ROUNDABOUT S OF SIDNEY	INT IMPROVEMENTS	N-20	1
SF 129-ROUNDABOUT LAME DEER	SAFETY	N-37	0
12 KM EAST OF JORDAN - EAST	RECONSTRUCTION	N-57	10
WEST LAUREL INTCH-WEST PHASE 1	RECONSTRUCTION	I-90	0
I-90 YELLOWSTONE R - BILLINGS	BRIDGE REPLACEMENT	I-90	5
ROCKVALE - LAUREL (NB LANES)	RECONSTRUCTION	N-4, P-28	9
SF 119-INT IMP - N GRASS RANGE	INT IMPROVEMENTS	N-57, N-61	1
ROCKVALE - LAUREL (2 LANES)	RECONSTRUCTION	N-4, P-28	9

- The following major preservation or reconstruction projects are needed but will not have adequate funding to begin prior to 2022.

Project Name/Location	Scope	Route	Length (miles)
SEELEY LAKE-SOUTH	REHAB	P-83	4
RESERVE ST INTCH - E & W	MILL & FILL	I-90	11
CONNER-N & S	RECONSTRUCTION	N-7	9
SALMON LAKE	RECONSTRUCTION	P-83	4
PARADISE-E. (EAST SECTION)	RECONSTRUCTION	P-6	3
MANHATTAN - BELGRADE	MILL & FILL	I-90	12
WATERLOO N&S	RECONSTRUCTION	P-55	12
BASIN - BOULDER	MILL & FILL	I-15	6
WISDOM - WEST	MILL & FILL	P-46	19
GALLATIN RV-2M N GALLATIN GATE	BRIDGE REPLACEMENT	L-16-494	0
BRIDGE PRES, GF IM, 2014	BRIDGE DECK	I-15, I-315, L-25-241	5
E OF ZURICH - HARLEM	RECONSTRUCTION	N-1	7
CHOTEAU - NORTH	RECONSTRUCTION	P-3	7
CHINOOK - EAST	MILL & FILL	N-1	14
DUTTON - N & S (NB)	REHAB	I-15	13
JCT SEC 462 - EAST & WEST	RECONSTRUCTION	N-57	9
US 2 - CULBERTSON	REHAB - MAJOR	N-1	1
SAVAGE - NORTH & SOUTH	OVERLAY	N-20	8
BEAVER CR-WIBAUX, 1M S WIBAUX	BRIDGE REPLACEMENT	P-27	2
FAIRVIEW - WEST	RECONSTRUCTION	P-201	6
RED LODGE - ROBERTS	RECONSTRUCTION	P-28	10
WHEATLAND COUNTY LINE - N	RECONSTRUCTION	P-45	10
GRASS RANGE - WEST	RECONSTRUCTION	N-57	5
MAIN STREET - LEWISTOWN	REHAB	N-57	2
W BLGS INTCH - PINEHILLS INTCH	MILL & FILL	I-90	10

- The following major capacity expansion or safety projects are needed but will not have adequate funding to begin prior to 2022.

Project Name/Location	Scope	Route	Length (miles)
WHITEFISH URBAN	RECONSTRUCTION	N-5, U-12002	1
COURTHOUSE COUPLET-KALISPELL	RECONSTRUCTION	N-5	0
US 93 - RONAN (URBAN)	RECONSTRUCTION	N-5	3
SF 159 FRENCHTOWN MEDIAN RAIL	SAFETY	I-90	10
RUSSELL ST-DAKOTA TO MOUNT	RECONSTRUCTION	U-8105	1
KAGY BLVD - S 19TH TO WILLSON	REHAB - MAJOR	U-1212	1
RR GRADE SEPARATION LIVINGSTON	GRADE SEPARATION		1
ANACONDA - WEST	RECONSTRUCTION	P-19	4
SF-169 VALLEY SPUR INTX IMPRV	INT IMPROVEMENTS	P-205, U-1211	0
TURNBAY-N OF GALLATIN GATEWAY	INT IMPROVEMENTS	N-50	1
GREAT FALLS - NORTH	RECONSTRUCTION	N-10	7
LINCOLN RD-MONTANA TO I-15	INT IMPROVEMENTS	I-15, S-453, U-5826	1
SF-169 LINCOLN APPLEGATE INTX	INT IMPROVEMENTS	U-5826	1
EAST OF EAST HELENA - EAST	REHAB - MAJOR	N-8	3
SF 159 LOLA SHEPARD INT IMPRV	SAFETY	N-8	1
BAINVILLE - EAST (PE II)	RECONSTRUCTION	N-1	8
SF 159 SO WIBAUX CRV IMPRV	SAFETY	P-27	5
SF 169 S OF GLASGOW SFTY IMPRV	SLOPE FLATTENING	P-42	1
SF-149 FORSYTH MEDIAN BARRIER	GUARDRAIL,SKID TREAT,BR	I-94	2
LITTLE DRY CREEK - EAST	RECONSTRUCTION	N-57	7
BILLINGS BYPASS	RECONSTRUCTION		15
US-12 BANK STABILIZATION	BANK STABILIZATION	N-14, P-14	1
BBP - FIVE MILE ROAD	RECONSTRUCTION		0
SF 159 SE COLUMBUS SHLDR WID	SAFETY	S-421	2
SF129-BILLINGS HRZNTL CRV SIGN	SIGNING - UPGRADE		0

COST TO MONTANA MOTORISTS OF DEFICIENT ROADS

An inadequate transportation system costs Montana motorists a total of $794 million every year in the form of additional vehicle operating costs (VOC), congestion-related delays and traffic crashes.

- Driving on rough roads costs Montana motorists a total of $296 million annually in extra vehicle operating costs. Costs include accelerated vehicle depreciation, additional repair costs, and increased fuel consumption and tire wear.

- Traffic crashes in which roadway design was likely a contributing factor costs Montana motorists a total of $328 million each year in the form of lost household and workplace productivity, insurance and other financial costs.

- Traffic congestion costs Montana motorists a total of $170 million each year in the form of lost time and wasted fuel.

- The chart below details the average cost per driver in the state's largest urban areas and statewide.

Location	VOC	Safety	Congestion	TOTAL
Billings	$592	$253	$268	$1,113
Great Falls	$872	$311	$234	$1,417
Missoula	$538	$280	$334	$1,152
Montana - Statewide	**$296 million**	**$328 million**	**$170 million**	**$794 million**

POPULATION, TRAVEL AND ECONOMIC GROWTH IN MONTANA

The rate of population and economic growth in Montana has resulted in increased demands on the state's major roads and highways, leading to increased wear and tear on the transportation system.

- Montana's population reached approximately 1 million residents in 2015, a 14 percent increase since 2000. Montana had approximately 781,000 licensed drivers in 2015.

- Vehicle miles traveled (VMT) in Montana increased by 32 percent from 2000 to 2015 – from 9.9 billion VMT in 2000 to 13 billion VMT in 2015. This was the fifth largest increase in VMT in the nation during that time.

- During the first nine months of 2016, VMT in Montana was up 3.3 percent from the first nine months of 2015, ahead of the national rate of VMT growth of three percent during that time.

- By 2030, vehicle travel in Montana is projected to increase by another 25 percent.

- Montana's gross domestic product (GDP), a measure of the state's economic output, increased by 43 percent from 2000 to 2015, when adjusted for inflation. This was the seventh largest increase in GDP during that time. U.S. GDP increased 27 percent from 2000 to 2015.

MONTANA ROAD CONDITIONS

A lack of adequate state and local funding has resulted in more than one-third of major urban roads and highways in Montana having pavement surfaces in poor condition, providing a rough ride and costing motorists in the form of additional vehicle operating costs.

- 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 Montana Department of Transportation (MDT) 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 that the data collected is adequate to provide an accurate assessment of pavement conditions on these roads and highways.

- Thirty-four percent of Montana's major locally and state-maintained urban roads and highways have pavements in poor condition, 40 percent are rated in mediocre or fair condition, and the remaining 26 percent are rated in good condition.

- Seven percent of Montana's major locally and state-maintained rural roads and highways have pavements in poor condition, 36 percent are rated in mediocre or fair condition, and the remaining 57 percent are rated in good condition.

- The chart below details the share of pavement in poor, mediocre, fair and good condition in the state's largest urban areas.

Location	Poor	Mediocre	Fair	Good
Billings	30%	20%	17%	33%
Great Falls	52%	24%	7%	18%
Missoula	26%	17%	23%	34%

- Roads rated in mediocre to poor condition may show signs of deterioration, including rutting, cracks and potholes. In some cases, these roads can be resurfaced, but often are too deteriorated and must be reconstructed.

- Driving on rough roads costs Montana motorists a total of $296 million annually in extra vehicle operating costs. Costs include accelerated vehicle depreciation, additional repair costs, and increased fuel consumption and tire wear.

MONTANA BRIDGE CONDITIONS

Eighteen percent of locally and state-maintained bridges in Montana show significant deterioration or do not meet current design standards, often because of narrow lanes, inadequate clearances or poor alignment. This includes all bridges that are 20 feet or more in length.

- Eight percent of Montana's bridges are structurally deficient. 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 large vehicles, including commercial trucks and emergency services vehicles.

- Ten percent of Montana's bridges are functionally obsolete. Bridges that are functionally obsolete no longer meet current highway design standards, often because of narrow lanes, inadequate clearances or poor alignment.

- The chart below details the share of structurally deficient or functionally obsolete bridges in Billings, Great Falls, Missoula and statewide..

Location	Structurally Deficient	Functionally Obsolete	Total Bridges
Billings	4%	13%	287
Great Falls	3%	15%	188
Missoula	7%	20%	209
Montana - Statewide	8%	10%	5,243

HIGHWAY SAFETY AND FATALITY RATES IN MONTANA

Montana's traffic fatality rate is the third highest in the nation. Improving safety features on Montana's roads and highways would likely result in a decrease in the state's traffic fatalities and serious crashes. It is estimated that roadway features are likely a contributing factor in approximately one-third of all fatal and serious traffic crashes.

- A total of 1,024 people were killed in Montana traffic crashes from 2010 to 2014, an average of 205 fatalities per year.

- Montana's overall traffic fatality rate of 1.58 fatalities per 100 million vehicle miles of travel in 2014 was significantly higher than the national average of 1.08 and the third highest in the nation.

- Montana's non-interstate rural roads have a disproportionately high fatality rate. The fatality rate on Montana's non-interstate rural roads in 2014 was three times higher than on all other roads in the state (2.41 fatalities per 100 million vehicle miles of travel vs. 0.79).

- The vast distances between Montana's populated areas and medical care heighten the need for a well-maintained, modern and safe system or roadways. Nearly all (96 percent) roadway departure fatalities and serious injuries occur in rural areas, making this type of severe crash the most common in Montana between 2004 and 2013. These crashes accounted for 67 percent of all fatalities and 55 percent of serious injuries.

- The chart below details the average number of people killed in traffic crashes from 2013 to 2015 in the state's largest urban areas, as well as the cost per motorist of traffic crashes.

Location	Average Fatalities	Cost Per Driver
Billings	19	$253
Great Falls	12	$311
Missoula	15	$280

- Traffic crashes in Montana imposed a total of $985 million in economic costs in 2014. TRIP estimates that traffic crashes in which roadway features were likely a contributing factor imposed $328 million in economic costs in 2014.

- 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.

- 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. The cost of serious crashes includes lost productivity, lost earnings, medical costs and emergency services.

- Several factors are associated with vehicle crashes that result in fatalities, including driver behavior, vehicle characteristics and roadway features. TRIP estimates that roadway features are likely a contributing factor in approximately one-third of fatal traffic crashes.

- Where appropriate, highway improvements can reduce traffic fatalities and crashes while improving traffic flow to help relieve congestion. Such improvements include removing or shielding obstacles; adding or improving medians; improved lighting; adding rumble strips, wider lanes, wider and paved shoulders; upgrading roads from two lanes to four lanes; and better road markings and traffic signals.

- Investments in rural traffic safety have been found to result in significant reductions in serious traffic crashes. A 2012 report by the Texas Transportation Institute (TTI) found that improvements completed recently by the Texas Department of Transportation 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). TTI estimates that the improvements on these roads are likely to save 880 lives over 20 years.

MONTANA TRAFFIC CONGESTION

Increasing levels of traffic congestion cause significant delays in Montana, 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.

- Based on Texas Transportation Institute (TTI) estimates, the value of lost time and wasted fuel in Montana is approximately $170 million per year.

- The chart below details the number of hours lost to congestion by the average driver in the state's largest urban areas, as well as the annual cost of traffic congestion per driver in the form of lost time and wasted fuel.

Location	Hours Lost	Congestion Cost
Billings	12 hours	$268
Great Falls	11 hours	$234
Missoula	15 hours	$334

- Increasing levels of congestion add significant costs to consumers, transportation companies, manufacturers, distributors and wholesalers and can reduce the attractiveness of a location to a company when considering expansion or where to locate a new facility.

FEDERAL TRANSPORTATION FUNDING

While the five-year federal surface transportation program includes modest funding increases and provides states with greater funding certainty, it falls far short of providing the level of funding needed to meet the nation's highway and transit needs.

- Signed into law in December 2015, the Fixing America's Surface Transportation Act (FAST Act), provides modest increases in federal highway and transit spending, allows states greater long-term 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 national highway funding and 18 percent in national transit funding over the duration of the program, which expires in 2020.

- According to the 2015 AASHTO Transportation Bottom Line Report, a significant boost in investment in the nation's roads, highways, bridges and public transit systems is needed to improve their condition and to meet the nation's transportation needs.

- AASHTO's report found that based on an annual one percent increase in VMT annual investment in the nation's roads, highways and bridges needs to increase 36 percent, from $88 billion to $120 billion, to improve conditions and meet the nation's mobility needs.

Investment in the nation's public transit system needs to increase from $17 billion to $43 billion.

- The Bottom Line Report found that if the national rate of vehicle travel increased by 1.4 percent per year, the needed annual investment in the nation's roads, highways and bridges would need to increase by 64 percent to $144 billion. If vehicle travel grows by 1.6 percent annually the needed annual investment in the nation's roads, highways and bridges would need to increase by 77 percent to $156 billion.

TRANSPORTATION AND ECONOMIC GROWTH IN MONTANA

The efficiency of Montana's transportation system, particularly its highways, is critical to the health of the state's economy. Businesses rely on an efficient and dependable 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.

- Annually, $101 billion in goods are shipped to and from sites in Montana, mostly by truck.

- Sixty-seven percent of the goods shipped annually to and from sites in Montana are carried by trucks and another 12 percent are carried by courier services or multiple mode deliveries, which include trucking.

- 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 two site selection factor behind only the availability of skilled labor in a 2015 survey of corporate executives by Area Development Magazine.

- The Federal Highway Administration estimates that each dollar spent on road, highway and bridge improvements results in an average benefit of $5.20 in the form of reduced vehicle maintenance costs, reduced delays, reduced fuel consumption, improved safety, reduced road and bridge maintenance costs and reduced emissions as a result of improved traffic flow.

Sources of information for this report include the Montana Department of Transportation (MDT), 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) and the National Highway Traffic Safety Administration (NHTSA).

Introduction

Montana'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 Montana's transportation system is critical to quality of life and economic competitiveness in the Treasure State.

Supporting quality of life and a robust economy in Montana requires that the state provide a safe, efficient and well-maintained transportation system. Inadequate transportation investment, which will result in deteriorated transportation facilities and diminished access, will negatively affect economic competitiveness and quality of life in Montana.

To accommodate population and economic growth, maintain its level of economic competitiveness and achieve further economic growth, Montana 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 Montana'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 Montana's roads, highways and bridges, funding needs, and the future mobility needs of the state. Sources of information for this report include the Montana Department of Transportation (MDT), 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), and the National Highway Traffic Safety Administration (NHTSA).

Population, Travel and Economic Trends in Montana

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

Montana's population grew to approximately 1 million residents in 2015, a 14 percent increase since 2000.[1] Montana had approximately 781,000 licensed drivers in 2015.[2] From 2000 to 2015, Montana's gross domestic product (GDP), a measure of the state's economic output, increased by 43 percent, when adjusted for inflation.[3] This was the seventh largest increase in GDP during that time.[4] U.S. GDP increased 27 percent from 2000 to 2015.[5]

From 2000 to 2015, annual VMT in Montana increased by 32 percent, from 9.9 billion miles traveled annually to 13 billion miles traveled annually.[6] This was the fifth largest increase in the nation during that time. During the first nine months of 2016, vehicle miles of travel in Montana were 3.3 percent higher than the first nine months of 2015.[7] U.S. vehicle miles of travel were three percent higher during the first nine months of 2016 than the first nine months of 2015.[8]

Based on population and other lifestyle trends, TRIP estimates that travel on Montana's roads and highways will increase by another 25 percent by 2030.[9]

Condition of Montana's Roads

The life cycle of Montana'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 Montana Department of Transportation (MDT) 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 that the data collected is adequate to provide an accurate assessment of pavement conditions on these roads and highways.

Thirty-four percent of Montana's major locally and state-maintained urban roads and highways have pavements rated in poor condition.[10] Another 40 percent of Montana's major urban roads are rated in mediocre or fair condition and the remaining 26 percent are rated in good condition.[11]

Seven percent of Montana's major locally and state-maintained rural roads and highways have pavements rated in poor condition.[12] Another 36 percent of Montana's major rural roads are rated in mediocre or fair condition and the remaining 57 percent are rated in good condition.[13]

The chart below details pavement conditions on major urban roads in the state's largest urban areas.[14]

Chart 1. Pavement conditions on major roads in the state's largest urban areas.

Location	Poor	Mediocre	Fair	Good
Billings	30%	20%	17%	33%
Great Falls	52%	24%	7%	18%
Missoula	26%	17%	23%	34%

Source: TRIP analysis of Federal Highway Administration data.

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 even 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.

The Costs 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 Montana motorists as a result of deteriorated road conditions is $296 million annually, or $385 per driver.[16] Drivers in the state's urban areas tend to have a higher vehicle operating cost. The average driver in the Billings urban area loses $592 annually as a

result of driving on deteriorated roads while the average Great Falls area driver loses $872 annually and the average Missoula area driver loses $538 annually.

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.[17]

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 2015 VOC and then using the HDM model to estimate the additional VOC paid by drivers as a result of substandard roads.[18] 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 Montana

Montana'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.

Eighteen percent of Montana's locally and state- maintained bridges (20 feet or longer) are currently rated as structurally deficient or functionally obsolete.

Eight percent of Montana's locally and state maintained bridges are rated as structurally deficient.[19] 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.

Ten percent of Montana's locally and state maintained bridges are rated functionally obsolete.[20] Bridges that are functionally obsolete no longer meet current highway design standards, often because of narrow lanes, inadequate clearances or poor alignment with the approaching roadway.

The chart below details the share of bridges in the state's largest urban areas that are structurally deficient or functionally obsolete.

Chart 2. Share of structurally deficient and functionally obsolete bridges in Montana's largest urban areas and statewide.

Location	Structurally Deficient	Functionally Obsolete	Total Bridges
Billings	4%	13%	287
Great Falls	3%	15%	188
Missoula	7%	20%	209
Montana - Statewide	8%	10%	5,243

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

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 Montana

A total of 1,024 people were killed in Montana traffic crashes from 2010 to 2014, an average of 205 fatalities per year.[21]

Chart 3. Traffic Fatalities in Montana from 2010 – 2014.

Year	*Fatalities*
2010	189
2011	209
2012	205
2013	229
2014	192
Total	**1,024**

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.

Montana's overall traffic fatality rate of 1.58 fatalities per 100 million vehicle miles of travel in 2014 was significantly higher than the national average of 1.08 and the third highest in the nation.[22] The traffic fatality rate on the state's rural roads is disproportionately high. The fatality rate on Montana's non-interstate rural roads is three times higher than on all other roads in the state (2.41 fatalities per 100 million vehicle miles of travel vs. 0.79).[23]

The vast distances between Montana's populated areas and medical care heighten the need for a well-maintained, modern and safe system or roadways. Nearly all (96 percent) roadway departure fatalities and serious injuries occur in rural areas, making this type of severe crash the most common in Montana between 2004 and 2013.[24] These crashes accounted for 67 percent of all fatalities and 55 percent of serious injuries.[25]

The chart below details the number of people killed in traffic crashes in the state's largest urban areas between 2013 and 2015, as well as the cost of traffic crashes per driver.

Chart 4. Average fatalities between 2013 and 2015 and crash cost per driver.

Location	Average Fatalities	Cost Per Driver
Billings	19	$253
Great Falls	12	$311
Missoula	15	$280

Source: TRIP analysis.

Traffic crashes in Montana imposed a total of $985 million in economic costs in 2014.[26] TRIP estimates that traffic crashes in which roadway features were likely a contributing factor imposed approximately $328 million in economic costs in 2014.[27]

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.[28]

Improving safety on Montana'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).[29] TTI estimates that the improvements on these roads are likely to save 880 lives over 20 years.[30]

Traffic Congestion in Montana

Increasing levels of traffic congestion cause significant delays in Montana, 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.

Based on TTI methodology, TRIP estimates the value of lost time and wasted fuel in Montana is approximately $170 million per year. The chart below details the number of hours lost annually for each driver in the state's largest urban areas, as well as the per-driver cost of lost time and wasted fuel due to congestion.

Chart 5. Annual hours lost to congestion and congestion costs per driver.

Location	Hours Lost	Congestion Cost
Billings	12 hours	$268
Great Falls	11 hours	$234
Missoula	15 hours	$334

Source: Texas Transportation Institute Urban Mobility Report.

Increasing levels of congestion add significant costs to consumers, transportation companies, manufacturers, distributors and wholesalers. Increased levels of congestion can reduce the attractiveness of a location to a company when considering expansion or where to locate a new facility. Congestion costs can also increase overall operating costs for trucking and shipping companies, leading to revenue losses, lower pay for employees, and higher consumer costs.

Montana Transportation Funding

The Montana Department of Transportation estimates it would need $1.46 billion annually to allow the state to make further progress in improving road, highway and bridge conditions; enhance traffic safety; and, make further modernization and capacity improvements to support economic development and quality of life.[31]

Despite those needs, MDT estimates it will face a funding shortfall that will average $874 million annually through 2021. And, while MDT funding is projected to increase slightly from 2016 to 2017, reaching $609 million in 2017, projected funding for 2018 through 2021 will be well below 2017 levels each year.[32]

The chart below provides information on the annual funding for MDT from 2016 through 2021. The chart also indicates the projected shortfall each year assuming $1.46 million in annual needs.

Chart 6. Annual MDT projected funding and annual projected funding shortfall.

MDT Proposed Funding	2016	FFY 2017	FFY 2018	FFY 2019	FFY 2020	FFY 2021
Capital Investment	$ 375,686,967	$ 373,222,792	$ 345,940,949	$ 349,323,661	$ 373,732,051	$ 380,556,304
Local Investment	$ 58,589,935	$ 69,948,975	$ 66,552,620	$ 61,909,911	$ 43,873,971	$ 50,812,034
Local Fuel Tax Allocation	$ 16,766,000	$ 16,766,000	$ 16,766,000	$ 16,766,000	$ 16,766,000	$ 16,766,000
Facilities	$ 5,914,049	$ 4,746,721	$ 6,503,065	$ 5,000,000	$ 5,000,000	$ 5,000,000
Maintenance	$ 9,678,876	$ 10,112,360	$ 10,112,360	$ 10,112,360	$ 10,112,360	$ 10,112,360
State Funded Maintenance	$ 131,914,914	$ 134,123,096	$ 126,595,857	$ 127,511,020	$ 127,511,020	$ 127,511,020
Total	**$ 598,550,742**	**$ 608,919,943**	**$ 572,470,850**	**$ 570,622,951**	**$ 576,995,402**	**$ 590,757,718**
	Annual transportation funding shortfall, assuming $1,460,000,000 in annual needs					
	$ 861,449,258	$ 851,080,057	$ 887,529,150	$ 889,377,049	$ 883,004,598	$ 869,242,282

Source: MDT response to TRIP survey.

The MDT has delayed $144.5 million in road projects that had been scheduled to begin in 2017 because of a lack of adequate funding.[33] Of the $144.5 million total price tag, $130 million would come from federal sources and $14.5 million from state funds required as a match.[34]

While the state will be able to address some needed projects with existing funding, numerous needed projects will not move forward at least through 2022.

Based on current levels of state funding, the following preservation, reconstruction, capacity expansion and safety projects were either underway, completed in 2016, or will be underway or completed no later than 2021.

Chart 7. Needed Montana preservation or reconstruction projects that are either underway, completed in 2016 or will be underway or completed no later than 2021.

Project Name/Location	Scope	Route	Length (miles)
S FK FLATHEAD - HUNGRY HORSE	BRIDGE REPLACEMENT	N-1	1
HUSON-EAST	RECONSTRUCTION	S-574	11
SWAMP CREEK-EAST	RECONSTRUCTION	N-1	5
FRENCHTOWN - E & W	REHAB - MAJOR	I-90	20
US 93 N - POST CREEK HILL	RECONSTRUCTION	N-5	3
RARUS/SILVER BOW CR STRUCTURES	BRIDGE REPLACEMENT	I-15	1
STONE CREEK - NORTH	RECONSTRUCTION	N-49	7
WHITEHALL-SOUTH	RECONSTRUCTION	P-55	12
SOUTH OF BOULDER-SOUTH	RECONSTRUCTION	S-399	15
YELLOWSTONE PARK	REHAB	N-50	21
EMERSON JCT - MANCHESTER	REHAB - MAJOR	I-15	4
WOLF CREEK - N & S	REHAB - MAJOR	I-15	7
KIOWA JCT - N & S	RECONSTRUCTION	P-58	5
GALATA-E&W	RECONSTRUCTION	N-1	8
BYNUM - SOUTH	RECONSTRUCTION	P-3	6
CULBERTSON - EAST	RECONSTRUCTION	N-1	11
ROSEBUD CO LINE - EAST	RECONSTRUCTION	P-14	11
BAINVILLE - SOUTH	RECONSTRUCTION	S-327	14
BR DECK, TERRY-FALLON AREA	BRIDGE DECK	I-94, X-81020	39
SIDNEY TO FAIRVIEW	OVERLAY	N-20	10
LAVINA - SOUTH	RECONSTRUCTION	N-53	6
HOBSON - EAST	RECONSTRUCTION	N-57	7
MISSOURI RIVER BRIDGE (US-191)	BRIDGE REHAB	N-61	0
27TH ST-1ST AVE S TO AIRPORT	MILL & FILL	N-53	3
TWO DOT - WEST	RECONSTRUCTION	P-14	5

Source: MDT response to TRIP survey.

Based on current levels of state funding, the following capacity expansion or safety projects were either underway, completed in 2016, or will be underway or completed no later than 2021.

Chart 8. Needed Montana capacity expansion or safety projects that are either underway, completed in 2016 or will be underway or completed no later than 2021.

Project Name/Location	Scope	Route	Length (miles)
SF 119-SLOPE FLATTEN S-206	SLOPE FLATTENING	S-206	9
RONAN - NORTH	RECONSTRUCTION	N-5	1
RUSSELL ST - IDAHO TO DAKOTA	RECONSTRUCTION	U-8105	0
RUSSELL ST-BROADWAY TO IDAHO	RECONSTRUCTION	U-8105	0
SF149 S OF STEVENSVLL SFTY IMP	MEDIAN AND SHOULDERS	S-269	6
TOSTON STRUCTURES (US-287)	BRIDGE REPLACEMENT	N-8	3
BELGRADE-SOUTH	RECONSTRUCTION	N-85	3
ROUSE-OAK/STORY MILL-BOZEMAN	RECONSTRUCTION	P-86	1
JCT S-437 - N & S	RECONSTRUCTION	N-8	6
SF 129 -SLOPE FLTTNNG BELGRADE	SLOPE FLATTENING	P-205	2
BELT - N & S - PHASE 3	RECONSTRUCTION	N-60, N-57	3
LOHMAN-E&W	RECONSTRUCTION	N-1	10
SF 119-JCT S-279/S-231	INT IMPROVEMENTS	S-279	1
CAPITOL INTCH/CEDAR INTCH/HLNA	BRIDGE REPLACE W/ADDED	I-15	1
SF 149 - YORK RD ROUNDABOUT	INT IMPROVEMENTS	S-280	0
BROADUS INTCHG - MILES CITY	INTERCHANGE	I-94	0
EAST HOLLY STREET - SIDNEY	REHAB - MAJOR	U-10408	1
SF 139-ROUNDABOUT S OF SIDNEY	INT IMPROVEMENTS	N-20	1
SF 129-ROUNDABOUT LAME DEER	SAFETY	N-37	0
12 KM EAST OF JORDAN - EAST	RECONSTRUCTION	N-57	10
WEST LAUREL INTCH-WEST PHASE 1	RECONSTRUCTION	I-90	0
I-90 YELLOWSTONE R - BILLINGS	BRIDGE REPLACEMENT	I-90	5
ROCKVALE - LAUREL (NB LANES)	RECONSTRUCTION	N-4, P-28	9
SF 119-INT IMP - N GRASS RANGE	INT IMPROVEMENTS	N-57, N-61	1
ROCKVALE - LAUREL (2 LANES)	RECONSTRUCTION	N-4, P-28	9

Source: MDT response to TRIP survey.

The following major preservation or reconstruction projects are needed but will not have adequate funding to begin prior to 2022.

Chart 9. Major preservation or reconstruction projects that are needed but lack funding to proceed prior to 2022.

Project Name/Location	Scope	Route	Length (miles)
SEELEY LAKE-SOUTH	REHAB	P-83	4
RESERVE ST INTCH - E & W	MILL & FILL	I-90	11
CONNER-N & S	RECONSTRUCTION	N-7	9
SALMON LAKE	RECONSTRUCTION	P-83	4
PARADISE-E. (EAST SECTION)	RECONSTRUCTION	P-6	3
MANHATTAN - BELGRADE	MILL & FILL	I-90	12
WATERLOO N&S	RECONSTRUCTION	P-55	12
BASIN - BOULDER	MILL & FILL	I-15	6
WISDOM - WEST	MILL & FILL	P-46	19
GALLATIN RV-2M N GALLATIN GATE	BRIDGE REPLACEMENT	L-16-494	0
BRIDGE PRES, GF IM, 2014	BRIDGE DECK	I-15, I-315, L-25-241	5
E OF ZURICH - HARLEM	RECONSTRUCTION	N-1	7
CHOTEAU - NORTH	RECONSTRUCTION	P-3	7
CHINOOK - EAST	MILL & FILL	N-1	14
DUTTON - N & S (NB)	REHAB	I-15	13
JCT SEC 462 - EAST & WEST	RECONSTRUCTION	N-57	9
US 2 - CULBERTSON	REHAB - MAJOR	N-1	1
SAVAGE - NORTH & SOUTH	OVERLAY	N-20	8
BEAVER CR-WIBAUX, 1M S WIBAUX	BRIDGE REPLACEMENT	P-27	2
FAIRVIEW - WEST	RECONSTRUCTION	P-201	6
RED LODGE - ROBERTS	RECONSTRUCTION	P-28	10
WHEATLAND COUNTY LINE - N	RECONSTRUCTION	P-45	10
GRASS RANGE - WEST	RECONSTRUCTION	N-57	5
MAIN STREET - LEWISTOWN	REHAB	N-57	2
W BLGS INTCH - PINEHILLS INTCH	MILL & FILL	I-90	10

Source: MDT response to TRIP survey.

The following major capacity expansion or safety projects are needed but will not have adequate funding to begin prior to 2022.

Chart 9. Major preservation or reconstruction projects that are needed but lack funding to proceed prior to 2022.

Project Name/Location	Scope	Route	Length (miles)
WHITEFISH URBAN	RECONSTRUCTION	N-5, U-12002	1
COURTHOUSE COUPLET-KALISPELL	RECONSTRUCTION	N-5	0
US 93 - RONAN (URBAN)	RECONSTRUCTION	N-5	3
SF 159 FRENCHTOWN MEDIAN RAIL	SAFETY	I-90	10
RUSSELL ST-DAKOTA TO MOUNT	RECONSTRUCTION	U-8105	1
KAGY BLVD - S 19TH TO WILLSON	REHAB - MAJOR	U-1212	1
RR GRADE SEPARATION LIVINGSTON	GRADE SEPARATION		1
ANACONDA - WEST	RECONSTRUCTION	P-19	4
SF-169 VALLEY SPUR INTX IMPRV	INT IMPROVEMENTS	P-205, U-1211	0
TURNBAY-N OF GALLATIN GATEWAY	INT IMPROVEMENTS	N-50	1
GREAT FALLS - NORTH	RECONSTRUCTION	N-10	7
LINCOLN RD-MONTANA TO I-15	INT IMPROVEMENTS	I-15, S-453, U-5826	1
SF-169 LINCOLN APPLEGATE INTX	INT IMPROVEMENTS	U-5826	1
EAST OF EAST HELENA - EAST	REHAB - MAJOR	N-8	3
SF 159 LOLA SHEPARD INT IMPRV	SAFETY	N-8	1
BAINVILLE - EAST (PE II)	RECONSTRUCTION	N-1	8
SF 159 SO WIBAUX CRV IMPRV	SAFETY	P-27	5
SF 169 S OF GLASGOW SFTY IMPRV	SLOPE FLATTENING	P-42	1
SF-149 FORSYTH MEDIAN BARRIER	GUARDRAIL,SKID TREAT,BR	I-94	2
LITTLE DRY CREEK - EAST	RECONSTRUCTION	N-57	7
BILLINGS BYPASS	RECONSTRUCTION		15
US-12 BANK STABILIZATION	BANK STABILIZATION	N-14, P-14	1
BBP - FIVE MILE ROAD	RECONSTRUCTION		0
SF 159 SE COLUMBUS SHLDR WID	SAFETY	S-421	2
SF129-BILLINGS HRZNTL CRV SIGN	SIGNING - UPGRADE		0

Source: MDT response to TRIP survey.

Federal Transportation Funding

Investment in Montana'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 Montana'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 Montana 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.[35]

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.[36] 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 AASHTO Transportation Bottom Line Report, a significant boost in investment in the nation's roads, highways, bridges and public transit systems is needed to improve their condition and to meet the nation's transportation needs. The AASHTO report found that based on an annual one percent increase in VMT that annual investment in the nation's roads, highways and bridges needs to increase by 36 percent, from $88 billion to $120

billion to improve conditions and meet the nation's mobility needs.[37] Investment in the nation's public transit system needs to increase from $17 billion to $43 billion.[38]

The 2015 AASHTO Transportation Bottom Line Report found that if the rate of vehicle travel increased by 1.4 percent per year, the needed annual investment in the nation's roads, highways and bridges would need to increase by 64 percent, to $144 billion. If vehicle travel grows by 1.6 percent annually the needed annual investment in the nation's roads, highways and bridges would need to increase by 77 percent, to $156 billion.[39]

Importance of Transportation to 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 Montana, particularly to the state's manufacturing, mineral extraction, agriculture and tourism industries.

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, $101 billion in goods are shipped to and from sites in Montana, mostly by trucks.[40] Sixty-seven percent of the goods shipped annually to and from sites in Montana are carried by trucks and another 12 percent are carried by courier services or multiple-mode deliveries, which include trucking.[41]

The cost of road and bridge improvements are more than offset by the reduction of user costs associated with driving on rough roads, the improvement in business productivity, the reduction in delays and the improvement in traffic safety. The Federal Highway Administration estimates that each dollar spent on road, highway and bridge improvements results in an average benefit of $5.20 in the form of reduced vehicle maintenance costs, reduced delays, reduced fuel consumption, improved safety, reduced road and bridge maintenance costs and reduced emissions as a result of improved traffic flow.[42]

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 two site selection factor

behind only the availability of skilled labor in a 2015 survey of corporate executives by Area Development Magazine.[43]

Conclusion

As Montana 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.

Montana 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 could 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.

While the modest funding increase provided by the FAST Act will be helpful, numerous projects to improve the condition and expand the capacity of Montana's roads, highways, bridges and transit systems will not be able to proceed without a substantial boost in state or local transportation funding. If Montana 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.

# # #

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