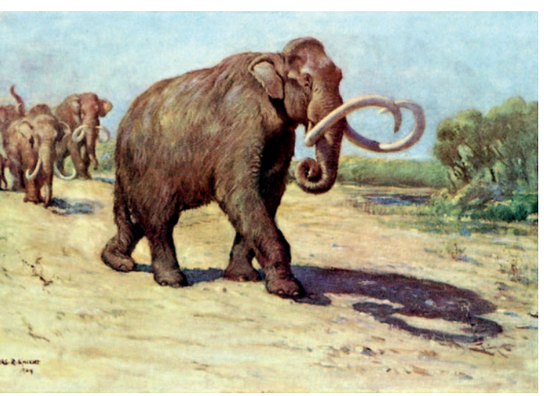
Ground Transportation

Moving goods and people throughout Montana

It's easy to take roads for granted; they're just there. Yet Montana could not function without the county roads, state highways, and freeways that move people, products, and materials across the state.

The first routes in this region were wildlife trails made by generations of large mammals: initially now-extinct camels, wild horses, and mastodons, and then today's deer, elk, and bison. Over time, wildlife herds established the safest and most efficient routes over mountains, along streams, and across shallow fords of large rivers.

Indigenous people followed these same trails plus established routes of their own. One of the most heavily traveled of these ancient "highways," today called the Old North Trail, stretched for thousands of miles along the Rocky Mountain Front between northern Alberta and Mexico.



Above: BNSF trestle bridge over the Teton River, Teton County.
PHOTO BY CHRIS BOYER/KESTREL AERIAL IMAGES

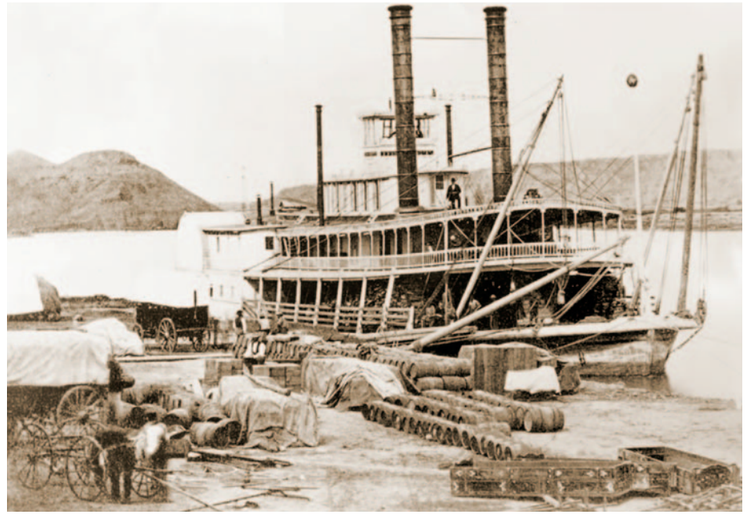
Left: Mammoths on the move, forming some of the first routes along the Rocky Mountain Front.
PAINTING BY CHARLES M. KNIGHT, 1909

COURTESY OF PIXAR

"Highways" are major roadways, especially those that run between towns or cities. A "freeway" is a type of highway designed for high-speed traffic. "Interstates," like I-90, are freeways that are part of the National Highway System.

European trappers, miners, cattle drivers, and pioneers followed game trails and Native routes while also establishing new thoroughfares like the Bozeman Road and the Corrine (Utah) Road to Bannack and Virginia City. The region's first engineered route—surveyed and graded—was the Mullan Road, built in the 1850s to link Fort Benton to the northwest coast of the Pacific Ocean via Walla Walla, Washington, along the Columbia River.

Over the next century, thousands of miles of dirt, gravel, and paved roads were engineered to move freight, people, and goods within Montana. Freeways linking Montana more closely with the rest of the nation came with development of the interstate highway system. Starting in the late 1950s, the Eisenhower-era project produced the east-west Interstate 90-94 and north-south Interstate 15.



The first engineered route in Montana, Mullan Road, was built to deliver goods from steamboats that traveled up the Missouri River to Fort Benton, the continent's farthest inland port. The cargo and travelers were trucked by ox cart over Mullan Pass a few miles northwest of Helena, then past Missoula up to Lake Coeur d'Alene, down to Walla Walla, Washington, and then by barge down the Columbia River to the Pacific Ocean and West Coast ports.

ROADS

A "freeway" is a type of highway designed for high-speed traffic. Access is allowed only from ramps at areas where it is safe for vehicles to enter and exit the streaming flow of vehicles (that's what the "controlled access freeway" signs on entrance ramps mean). Traffic traveling in opposite directions is usually separated by a median or concrete barrier, for safety, and vehicles wanting to cross a freeway must use an overpass or underpass.

Unlike in most states, bicycle travel is legal along the shoulders of freeways running through Montana.

"Highways" are major roads, especially those that run between towns or cities. U.S. highways, also known as U.S. routes and signed with a number within a shield design, were built to facilitate vehicle movement throughout the nation, predating the interstate system. States also have their own highway systems, which in Montana are signed with a number in a box (primary routes) or a number within an inverted arrowhead (secondary routes).

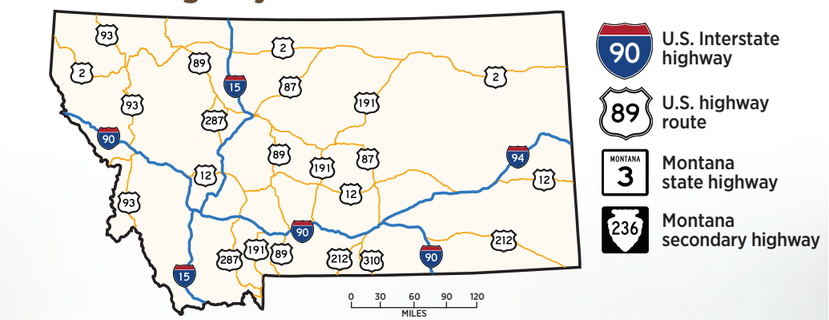
Typically, there are no exit or entrance ramps on a highway. Highways have cross-traffic, traffic signals, and sometimes pedestrian crossings. They also have lower speed limits than freeways.

County, or local, roads are paved or gravel and maintained by a county. Travel on roads that are "not maintained" (meaning no grading or snow removal) can be difficult or impossible in winter or muddy conditions.

Construction and maintenance

Most Montana roads are built and maintained by the Montana Department of Transportation (MDT) using 87 percent federal funds and 13 percent state funds (gasoline, diesel, and other taxes). MDT distributes about $50 million each year to towns and counties for local road building and upkeep.

U.S. Highways in Montana



When snow starts covering Montana highways, MDT crews head out in snowplows, including "double-winged juice trucks" (fitted with a pair of 11-foot plows and carrying tanks of salt-sand-magnesium chloride solution to spray on roads).

FROM TOP: MONTANA HISTORICAL SOCIETY; MONTANA DEPARTMENT OF TRANSPORTATION

A long-haul semi makes its way up an icy stretch on I-90 in western Montana. Drivers are required to put chains on their truck tires when traversing especially slippery mountain passes.

State and county road crews extend the life of pavement with regular chip sealing. They spray a thin layer of heated liquid asphalt on deteriorating road sections, then place gravel (chips) on top. The gravel is imbedded into the liquid asphalt by steam rollers and further compacted over the next few months by road traffic.

Regular road maintenance saves money. Once a road deteriorates to the point of having to be rebuilt, the cost per mile is astronomical.

Traffic safety is a major concern for the state, so crews regularly plow, sand, and de-ice in winter. During the rest of the year, they inspect and repair signs and lights, remove vegetation and road-killed wildlife, and clean drainage culverts to prevent road flooding.

MDT also manages 35 rest areas along highways and freeways where travelers can find picnic tables, places for walking and pet exercise, restrooms, highway maps, and current weather information.

FROM TOP: SHUTTERSTOCK; VALLEY SAND & GRAVEL

Gravel pits

As new roads, highways, and subdivisions are built to accommodate Montana's growing population, more and more gravel pits, also called open-pit mines, pop up across the state. Gravel deposits are usually found in ancient riverbeds near the Yellowstone, upper Missouri, Bitterroot, Clark Fork, Musselshell, and other major rivers, close enough to the surface to make extraction easier. After gravel is mined, it is dumped onto screens to remove large rocks and then is crushed, sorted, and washed. The fine gravel is used as drainage material, pipe bedding, and road foundations, and to make concrete.

DOT weather stations

"Weather Info. Tune Radio to..." These electronic messages appearing on highway signs throughout Montana come from the state's Road Weather Information System (RWIS), which collects current weather and road conditions from 73 sites across the state and relays it to a Montana Department of Transportation (MDT) website and app.

MDT's Travel Info mobile app gives travelers access to a state map showing current road conditions, live video, or recent photographs of most mountain passes and other treacherous highway sections; travel alerts; and construction details.

The information also allows MDT maintenance crews to schedule staff and equipment based on the latest weather and pavement surface conditions. Current weather information improves response time and winter maintenance, and reduces the public's exposure to hazardous roadway conditions.

Adopt-A-Highway Program

The Montana Department of Transportation's Adopt-A-Highway Program encourages people to help pick up litter and trash along highways to maintain the state's scenic beauty and reduce environmental contaminants washing into streams and rivers. Sponsors such as Boy Scout troops, local businesses, or families "adopt" 2 miles of highway for two years and agree to pick up litter twice annually. MDT provides safety vests, trash bags, and bag pick up and disposal.

FWP, highways, and railways

Highways and high-speed highway traffic can be major barriers to wildlife migrations. Because animals try to cross anyway, many are killed, causing dangerous accidents and costly vehicle damage.

Montana maintenance crews collect several thousand dead animals—mostly deer but also coyotes, elk, bears, and even moose—from state roadways each year to prevent the carcasses from attracting scavengers and causing additional accidents. Countless additional animals are fatally wounded and die away from the roads.

FWP works with MDT to identify major migration crossings and install "WILDLIFE X-ING" signs, fencing, and off-road animal crossings.

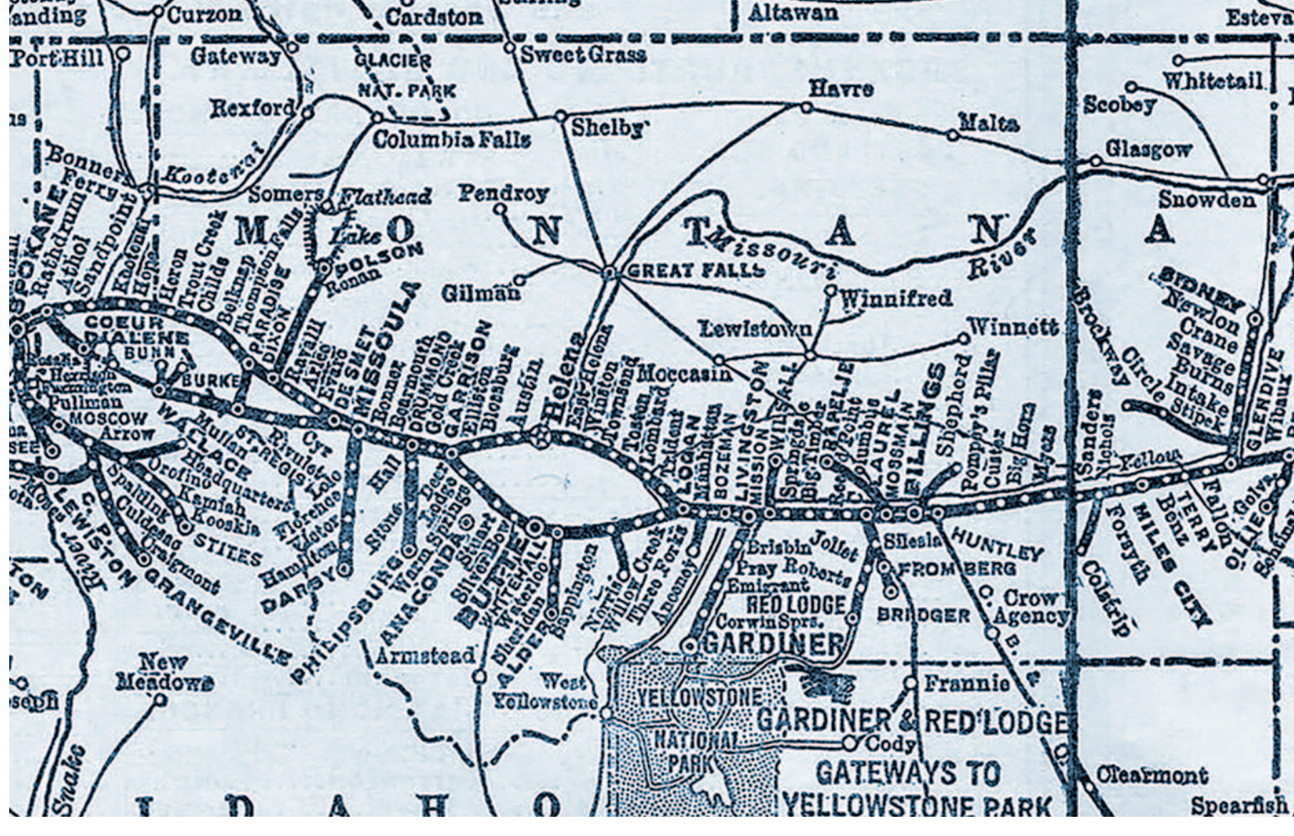
In recent years, Montana has received several million dollars in federal funding to plan and build wildlife crossings and fencing on busy roads, mainly in western Montana, where collisions with grizzly bears and other migrating wildlife are most common.

FWP also works with BNSF railway to find ways to reduce grizzly mortality along lines near Glacier National Park, in the Cabinet-Yaak Ecosystem, and, in cooperation with the Blackfeet Tribe, on the Blackfeet Reservation. Bears are drawn to tracks by grain spills and dead livestock struck by trains. Environmental groups have called for the railway to install warning lights and sirens to keep bears away from high-risk rail stretches like narrow train bridges and to quickly remove spilled grain and train-killed livestock carcasses.

Most recently, FWP, the U.S. Fish and Wildlife Service, BNSF, and the Blackfeet Nation have been working cooperatively on a habitat conservation plan that would help fund grizzly bear conservation.

Left: Seemingly oblivious to traffic, a mule deer buck crosses a highway in central Montana. Above: Grizzly bears use rail lines as travel corridors and are attracted to spilled grain and train-killed livestock carcasses.

CLOCKWISE FROM TOP LEFT: SHUTTERSTOCK; MIKE YOUNG/WILD MONTANA; MISSOURI DEPT. OF TRANSPORTATION; SHUTTERSTOCK; PAUL N. QUENEAU



FROM TOP: LIBRARY OF CONGRESS; SMITHSONIAN INSTITUTION ARCHIVES

RAILROADS

Because they were often built on the same historic routes used by wildlife then Indigenous people, railroads run along every major highway throughout Montana. Though not as prevalent as a century ago, rail is still a major form of transportation and essential to the state's economy.

In the late 19th and early 20th centuries, railroads shaped the newly formed state of Montana more than any other technology. They sped up everything—immigration, mining development, and shipping of livestock, grain, timber, and coal to distant markets.

Completed in 1881, the first line ran north to Butte from Corrine, Utah, off the Union Pacific's newly built transcontinental line. It and subsequent routes were built by Chinese, Japanese, Irish, Norwegian, Bulgarian, and Italian laborers. The work was difficult, dangerous, and poorly paid.

Next, the Northern Pacific, Great Northern, Milwaukee Road, and Burlington railways built major lines through Montana. Smaller railways constructed shorter routes to fill in the gaps. By 1910 more than 4,000 miles of railroad tracks crisscrossed the state.

Above: A Northern Pacific rail map from 1940 depicts all stations along the route in Montana. Today most stations are no longer active and many towns built around depots have shrunk or disappeared altogether. The Great Northern built a similar route with dozens of stations along the Hi-Line as part of its Chicago-to-Seattle line. Today that route has only 12 stops in Montana.

Below: A postcard of the Northern Pacific Railroad Depot in Livingston, the largest passenger depot on the Northern Pacific between St. Paul and Seattle. The depot was a major tourism hub until NP discontinued passenger trains in 1971.

Freight trains are loaded with wheat and barley at a regional grain elevator hub in Fairfield. Though railways had to discontinue passenger service following construction of the interstate highway system in the 1950s and '60s, they are still the least expansive way to ship coal, lumber, and grain.

Because rail freight can't be moved easily beyond the tracks, railroads lost much of their freight business to road transport over the years, especially after establishment of the nation's interstate system. On the other hand, rail transport is more energy efficient and environmentally friendly than road transport. For some materials, like coal, grain, and lumber, rails is usually the least expensive option.

Rail today

Currently, there are 3,300 miles of active rail in Montana, about 25 percent less than during the boom era. Just 10 companies operate these lines compared to more than three dozen a century ago. An even bigger difference from the railroad's heyday is the 85 percent decline in the number of stations. These days, passenger service is provided only by Amtrak, with 12 stops along its 700-mile route across northern Montana.

The major rail line today is BNSF (Burlington Northern Santa Fe), operating roughly 60 percent of the rail miles. The Great Northern consolidated with Burlington in 1969 to be Burlington Northern, which later merged with the Santa Fe. BNSF trains are distinguished by the Omaha Orange and Pullman Green color combination on the engines, a tribute to the original colors of early Great Northern engines.

Also commonly seen these days are the dark blue engines of Montana Rail Link (recently acquired by BNSF), which runs on roughly 25 percent of the active rails today.

About half the freight moved through Montana is coal, carried in open-top hoppers. The coal is mined in southeastern Montana and transported to power plants in Washington, Japan, and South Korea. The other half is grain carried in closed-top hoppers, lumber and other wood building materials in centerbeam rail cars, petroleum products in tank cars, and shipping containers on flatbed cars.

Noise and blockages

The two biggest concerns people have with trains are horn noise and traffic blockages. Because there are thousands of fatalities at train crossings each year across the nation, federal law requires trains approaching road crossings to sound their horn. Communities may apply to the Federal Railroad Administration to establish a quiet zone, where the railroad is not required to automatically sound the horn at each crossing.

Trains need to stop at rail yards to load and unload freight or remove cars destined for different locations. Because trains are longer than ever—some stretching over 1 mile—the stoppages can block multiple intersections in a town. This can delay ambulances, firefighters, and police officers in emergencies. Though many states have passed laws limiting the time a train can stop, federal law governs much of the railroad industry, including stoppages, and supersedes state law.

STEVE MCMORRAN

Borrow pits

Also spelled and pronounced "barrow," and also known as borrow ditches or barrow ditches, these shallow drainage ditches along both sides of highways and county roads keep water from pooling on the roadways. No one knows for sure, but the word may come from how road builders "borrowed" dirt and gravel from the ditch to construct the road base.

Snow gathers in a borrow pit along Highway 287 near Cameron.

Driver's wave

Done with a single index finger, two fingers, or a quick hand raise, the driver's wave is how many rural residents acknowledge each other while passing on the road. Done primarily on dirt or gravel roads far from cities and towns, this subtle gesture reinforces solidarity among people living in remote areas. It says, "Out here in the blizzards and gumbo, miles from help, we stick together. If you need assistance, I'll be there."

Snow fences

Wind is a constant in rural Montana east of the Divide. One of the many problems it can cause is formation of snowdrifts on roads. In especially windy areas, the Montana Department of Transportation erects 6- to 20-foot-tall wooden snow fences. The fence slats slow the wind, causing it to drop much of the snow it's carrying and helping prevent roads from drifting over.

Historical highway markers

Montana has one of the most extensive systems of historical highway signs in the United States. The original signs, erected in the 1930s, were envisioned by Robert H. Fletcher, an engineer and unofficial tourism booster with the then-called Montana Department of Highways.

Fletcher wrote the text for the first 98 signs using colorful language and imagery that reinforced Hollywood notions of the Wild West. Consider this one on Highway 2 in Havre:

"Cowpunchers, miners, and soldiers are tolerably virile persons as a rule. When they went to town in the frontier days seeking surcease from vocational cares and solace in the cup that cheers, it was just as well for the urbanites to either brace themselves or take to cover. The citizens of any town willing and able to be host city for a combination of the above diamonds in the rough had to be quick on the draw and used to inhaling powder smoke. Havre came into existence as a division point when the Great Northern Railroad was built and purveyed pastime to cowboys, doughboys and miners on the side. It is hard to believe now, but as a frontier camp, she was wild and hard to curry."

Many of those signs have since been edited to reflect modern sensibilities, correct spelling errors, and improve historical accuracy. More signs have been added over the years. Today there are 298 Montana Department of Transportation highway signs that explain historical events and sites, geological and paleontological wonders, and other places of interest.

Though today made with modern materials, most still replicate the classic design of a large brown sign hanging from a wooden crossbeam set on tall posts beside a paved pullout, announced beforehand with a brown trapezoidal-shaped "Historical Point Ahead" sign along the highway.

Hundreds of other historical signs are written and funded by the National Park Service, Montana Fish, Wildlife & Parks, the Montana Historical Society, local historical societies, and the Daughters of the American Revolution. See a list of all Montana historical markers, including text and location, at hmdb.org.

CLOCKWISE FROM TOP LEFT: SHUTTERSTOCK; JOHN VACHON/LIBRARY OF CONGRESS; JIMMY EMERSON; NICHOLAS DANIELSON