Since 1923 the Alaska Railroad has been the transportation lifeline for the biggest state in the Union. Some 75 percent of Alaskans live along the rail line.

Starting from the ice-free, deep water ports of Anchorage and Seward, the railroad snakes its way 467 miles north through some of the most spectacular and rugged scenery in North America, (and the harshest climate next to Siberia) to the terminus at Fairbanks.

The Alaska Railroad is an unusual railroad:

- It is the only major railroad ever built by the federal government.
- It is entirely “landlocked,” with no rail connections with any other North American railroad.
- Its only direct access to the lower 48 states is by barge and railroad car ferries which make the 1200 nautical mile voyage to Seattle.
- It is the only U.S. freight railroad that still maintains regular passenger service.

Alaska remained undeveloped until 1897, when the discovery of gold in the neighboring Canadian Yukon awakened U.S. interest in its faraway territory. Government geological expeditions were sent deep into the backcountry; they reported finding large reserves of coal, copper and other minerals. By the early 1900s mining companies had begun exploiting these resources. Several shortline railroads were constructed to carry the coal and copper ore out. There were no rail connections through British Columbia, so the loads had to be dumped into barges at the port towns of Cordova and Seward and then towed 1200 nautical miles south to the nearest U.S. port at Seattle. The shortlines soon found that operating in a sub-Arctic climate with essentially one way traffic devoured their profits. With a population in 1910 of less than 65,000 people, Alaska could not support a railroad run by private enterprise. If Alaska was ever to be developed, the Federal government would have to build a railroad and subsidize its losses.

In Seattle, business interests saw such a possibility as a tremendous opportunity for their city. They lobbied Congress hard to enact a railway bill. The U. S. Navy was also interested in getting Alaska coal for their North Pacific squadron. In December 1913, President Woodrow Wilson included a proposal for an Alaska rail line in his State of the Union message, and declared: “We must use the resources of the country, not lock them up.”

On March 12, 1914, the Alaska Railroad Bill was enacted into law. Congress appointed an engineering commission to oversee the project, and gave it a simple mandate: build a rail line not to exceed 1,000 miles long that would connect Alaska’s Pacific coast with its interior coal fields, and do it for $35 million ($842 million today).

Frederick Mears, a career Army officer and civil engineer was put in charge of surveying and construction, at a salary of $10,000 per year. Mears had served in the infantry during the Philippine Insurrection in the early 1900s in the aftermath of the Spanish American War. In 1906 he went to work on the Panama Canal, in charge of relocating the Panama railroad and operating it. In 1914 the canal opened and Mears was available for an even greater challenge.

The building of the Alaska Railroad was an engineering achievement comparable to the Panama Canal. Mears commanded an army of civilian workers and contractors, which at the peak of construction numbered 4500. Except for what could be utilized of the existing shortline railroads, everything needed for a major railroad had to be created from scratch: rail yards and depots, machine and repair shops, housing for workers, hospitals, power plants, and sawmills for converting tree trunks into cross-ties. Town sites, streets and waterworks were laid out for the increase in population which the railroad would bring. Engineers, surveyors, track gang bosses, doctors and nurses, cooks and telegraphers, had to be hired; many of them were veterans of the Panama Canal construction.

Modern docks had to be built at Seward, on the south coast and at Ship Creek, a small village at the head of Cook Inlet on the Pacific side, which would soon be re-named Anchorage. Into these new harbors would come shiploads of rail, spikes, tie plates and switch stands; reels of telegraph and telephone wire; timber and steel bridge sections, steam shovels, derricks, locomotives, freight and passenger cars. With few roads into the outback, trucks were of little use. Thousands of horses were needed to haul equipment and supplies; each animal, kicking and whinnying, was lowered to the dock by a canvas sling under its belly.

Building the Alaska Railroad 1914-1923

Alaska, our 49th state, was once owned by Russia. In 1867, needing money and worried that the British might seize Alaska for Canada, Secretary of State William H. Seward negotiated a treaty in which the United States purchased Alaska for a vast wilderness, twice the size of Texas, that bordered the Arctic Circle.

The newspapers of the day called it “Seward’s Folly,” and “Seward’s Icebox,” and questioned the value of acquiring this remote and forbidding land of deep forests, wild rivers, and towering mountain ranges. It was located so far north that for weeks in winter the sun barely rose, and for weeks in summer the sun barely set. Except for scattered settlements of native Aleut and Tlingit peoples, the interior of Alaska was unexplored and inaccessible. Untold mineral wealth might lie beneath its permanently frozen subsoil, but in 1867 there was no practical way to get at it, or bring it out.

August 1, 1867, the Treasury warrant authorizing the payment for Alaska

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By November 1914, the surveying parties had mapped out the main route for the railroad. Starting from Seward on the Gulf of Alaska, the rails would run north 467 miles — through Anchorage, then across mountain ranges with three of the highest peaks in North America, and ending at Fairbanks, a gold mining town on the Chena River.

Thousands of trees had to be felled to create the right of way; the trunks were sawn into ties. Private contractors were hired to clear and grade 100 foot sections called “stations.” Working 12 hour shifts, small groups of workers used horses pulling grading plows to smooth the ground so tie-laying crews could begin their work. Dynamite was used to blast away millions of cubic yards of rock. The broken rock was hauled away to be crushed for ballast and fill. As soon as a new section of track was laid, supply trains could bring up rail and track components. These were transferred onto flat bed carts — or in winter onto sleds — pulled by teams of sturdy Percheron horses.

Mile by mile, the railroad advanced north during 1915 and 1916. Mears and his engineers had to build 8–1/2 miles of bridges and trestles — many built first in timber and then later more permanently in steel. There were three rivers to cross and deep canyons to span. Seven tunnels had to be bored through the mountains. The bridge builders worked all year, even in the depths of winter, when the temperature could plunge to 60 degrees below zero. In the intense cold, boilers provided hot water to mix the cement and gravel and to keep the mixture from freezing before it could cure properly.

The long winter season — from October to May — brought frequent blizzards that buried tracks under huge drifts. To keep the line clear, several steam locomotives were needed to push the plow blades forward. Trains ran between walls of snow as high as 20 feet in places, after the worst storms. In spring, heavy snow melt brought floods that washed away gravel and undermined ties.

In April, 1917, the United States entered World War One. The Army sent Mears and half of his engineering and clerical staff to France, where they built railroads to support the troops fighting on the Western Front. The manpower shortage on the Alaska Railroad slowed but did not stop construction. From Europe to take charge again, he found that half the line had been completed. By September 1920, the track had reached the 264 mile point. Now the push was on to finish the job. In 1922, the last great bridge was completed — across the Tanana River, which flows south of Fairbanks. The first train crossed the Tanana as crews were hammering the final rivets into the upper bridge framework.

On July 15, 1923, President Warren G. Harding drove the ceremonial last spike — made of solid gold — to mark completion of the railroad. The gold spike was given a light tap and then replaced with a steel spike. The president had to try three times to set the spike into the tie. Now it was done. Eight years after the first survey stakes were hammered into the ground, the line was open from Seward to Fairbanks, at a cost of $86 million. This was $25 million over what the 1914 Congressional mandate had specified.

With the completion of the Alaska Railroad, Mears resigned from Army service and went to work for the Great Northern Railroad. He built the eight-mile long Cascade Tunnel in Washington State — another one of the great achievements of American engineering in the first half of the twentieth century. Mears never returned to Alaska. He died at the age of 67 in 1939. The Tanana River bridge was later re-named the Frederick Mears Memorial Bridge.

The US Department of the Interior operated the Alaska Railroad from its beginnings until 1967, when it was turned over to the Department of Transportation. In 1985, the State of Alaska acquired ownership of the line and operates it today. In the early years of operation the railroad lost money every year, with too little traffic going, in effect, from nowhere to nowhere. Congress had to pick up the deficit. Not until 1938 did Alaska’s population and economy reach the point of growth for the railroad to finally earn a profit.

During World War Two, the Alaska Railroad proved to be vital in winning the war in the Pacific. In June 1942, Japanese military forces seized two small islands in the Alaska’s Aleutian chain which stretches a thousand miles into the North Pacific. The railroad brought troops and armaments to drive them out, and to keep military bases supplied at Anchorage and Fairbanks.
After the war, the railroad had become so important to the region that the federal government spent $100 million in replacing the original 70 lb./yd. rail with heavier 115 lb. rail and replacing bridges worn out from heavy war-time traffic. In 1985, after acquiring the railroad, the State of Alaska spent $70 million to restore the line.

Today the Alaska Railroad depends on freight for 65% of its revenues — petroleum makes up half of its freight traffic, with coal, gravel, and other commodities making up the balance. Tourism by rail is another source of revenue. The Alaska Railroad operates passenger trains that make the run from Anchorage to Fairbanks in twelve hours. Cruise ships docking at Alaskan ports often attach their own private passenger cars to Alaska Railroad trains. From the comfort of glass-roofed dome cars, visitors can see Mount McKinley and glimpse the vastness of Denali National Park — the same majestic scenery first glimpsed by Frederick Mears and his construction crews back in 1914.

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MUSCULAR MAGNETS

Super Magnet Picker-Upper
4124-61 In the shop or on a spur track, it is easy to pick up a dropped wrench or tie plates or spikes. Handle length adjusts from 22” to 38”.

Magnet Base Sign Holders for flush or exposed rail
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4115-114 (blue), 4115-115 (red), 4115-117 (amber) 3-1/2” wide light fits in your pocket. Brilliant 4 LED lights. Magnet base and belt clip. Uses two AA batteries.

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4020-16 Pops open frozen hatch covers on covered hopper cars. Weighs only 5 lbs. Worker should be secured in full protection gear.

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4015-144 Marker tells switching crew how far they can push a car in towards a switch or converging track before reaching “foul line.”

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