

Official Map and Guide



Union Pacific Railroad

Spanning A Continent

No sooner were America's first railroads operating in the 1830s than people of vision foresaw transcontinental travel by rail. The idea gained adherents as a national railroad system took shape. By the beginning of the Civil War, America's eastern states were linked by 31,000 miles of rail, more than in all of Europe. Virtually none of this network, however, served the area beyond the Missouri River. Until the "Great American Desert" and the Rockies were bridged, the vast western territories would be a part of the Nation in name only. A continent-spanning railroad would also bring more tangible benefits: It would boost trade, shorten the emigrant's journey, and help the army control Indians hostile to white settlement. Anticipating great financial and political rewards, northern, midwestern, and southern senators made their cases for locating the eastern terminus in their regions.

In California, Theodore Judah had his own plan for a transcontinental railroad. By 1862 the young engineer had surveyed a route over the

Sierra Nevada and persuaded wealthy Sacramento merchants to form the Central Pacific Railroad. That year Congress authorized the Central Pacific to build a railroad eastward from Sacramento, and in the same act chartered the Union Pacific Railroad in New York. After the Civil War had removed the Southern senators from the debate over the location, the central route near the Mormon Trail was chosen, with Omaha as the eastern terminus. Each railroad received loan subsidies of \$16,000 to \$48,000 per mile, depending on the difficulty of the terrain, and ten land sections for each mile of track laid. The Central Pacific broke ground in January 1863, the Union Pacific that December, but neither made much headway while the country's attention was diverted by the Civil War. Investors could reap greater profits from the war, and the army had first priority on labor and materials. So Central Pacific's Collis Huntington and Union Pacific's Thomas Durant, exemplars of the no-holds-barred business ethics of the period, visited Washington with enough cash to help congressmen understand their problems. A second Railroad Act of 1864

doubled the land subsidies, but little track was laid until labor and supplies were freed at war's end.

Central Pacific crews faced the rugged Sierras almost immediately. While the Union Pacific started with easier terrain, its work parties were harassed by Indians. With eight flatcars of material needed for each mile of track, supplies were a logistical nightmare for both railroads, especially Central Pacific, which had to ship every rail, spike, and locomotive 15,000 miles around Cape Horn. Both companies pushed ahead faster than anyone had expected. The work teams, often headed by ex-army officers, were drilled until they could lay 2 to 5 miles of track a day on flat land.

Union Pacific drew on the vast pool of America's unemployed: Irish, German, and Italian immigrants, Civil War veterans from both sides, and ex-slaves—8,000 to 10,000 workers in all. It was a volatile mixture, and drunken bloodshed was common in the "Hell-on-wheels" towns thrown

up near the base camps. Because California's labor pool had been drained by the rush for gold, Central Pacific imported 10,000 Chinese, the backbone of the railroad's work force.

By mid-1868, Central Pacific crews had crossed the Sierras and laid 200 miles of track, and the Union Pacific had laid 700 miles over the plains. As the two workforces neared each other in Utah, they raced to grade more miles and claim more land subsidies. Both pushed so far beyond their railheads that they passed each other, and for over 200 miles competing graders advanced in opposite directions on parallel grades. Congress finally declared the meeting place to be Promontory Summit, where, on May 10, 1869, two locomotives pulled up to the one-rail gap left in the track. After a golden spike was symbolically tapped, a final iron spike was driven to connect the railroads. The Central Pacific laid 690 miles of track; the Union Pacific 1,086. They had crossed 1,776 miles of desert, rivers, and mountains to bind together east and west.

A "Grand Anvil Chorus"

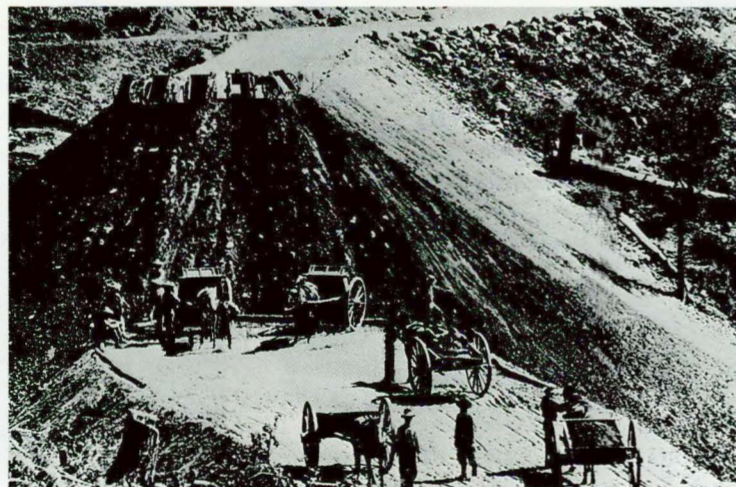
Surveying



Oakland Museum

Surveyors, working hundreds of miles ahead, set no grade steeper than 116 feet of rise per mile.

Grading

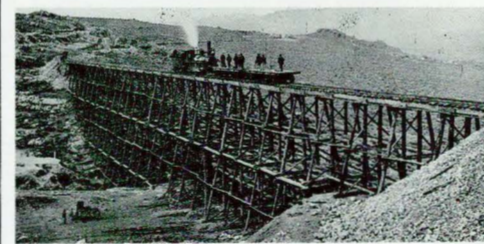


Southern Pacific

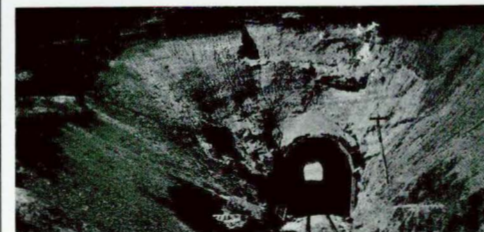
Using picks and shovels, carts, one-horse scrapers, and black powder, graders prepared about 20

miles of bed at a time, cutting ledges, blasting hills, and filling huge ravines.

Trestles and Tunnels



Oakland Museum

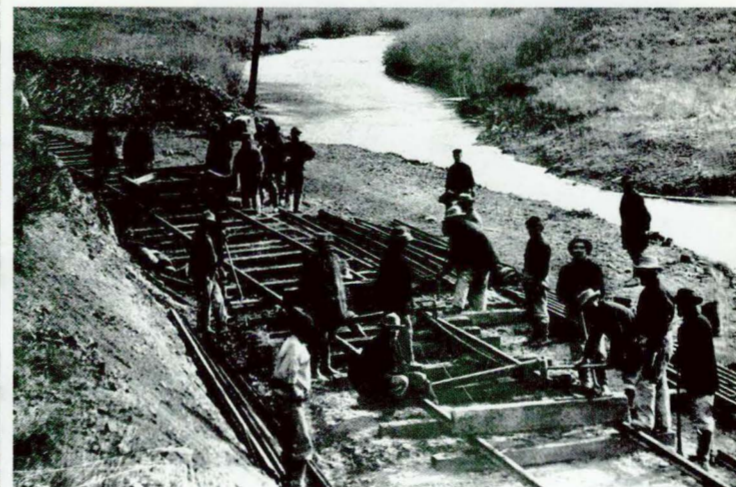


National Archives

Workers 5 to 20 miles ahead built high wooden trestles and dug tunnels. Central Pacific blasted 15

tunnels through Sierra granite, sometimes resorting to dangerous nitroglycerine.

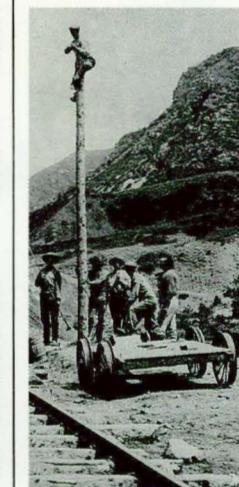
Track Laying



On 2,500 ties per mile, gangs laid two pairs of 30-foot, 560-pound rails a minute. Spikers drove

10 spikes per rail, 3 blows per spike. Here, rail-benders form curves with sledge hammers.

Telegraph



Oakland Museum

Nation's second transcontinental telegraph was strung beside the track as the railroad advanced.

Snow Sheds



Library of Congress

Drifts and avalanches so hindered trains in the Sierras that Central Pacific had to build 37 miles of

peaked snow sheds and sloped galleries to keep snow off tracks.



Golden Spike

About Your Visit
Golden Spike National Historic Site is 32 miles west of Brigham City. Southbound travelers on I-84 use Exit 26 and drive south on Utah 83 to Lamo Junction. Turn right and follow signs to Visitor Center (8 miles). Other interstate travelers use Exit 368 off I-15 and

drive west on Utah 13 and 83 through Corinne to Lamo Junction. Turn left and follow signs to Visitor Center. Motels, restaurants, and camping facilities are available in Brigham City, Tremonton, or Ogden. The visitor center offers exhibits, information services, and audiovisual programs.

About 1.7 miles of track have been relaid on the original roadbed where the rails were joined, and exact replicas of the "Jupiter" and "119" operate during the summer season. All natural features and cultural artifacts are protected. Metal detectors, digging, and fires are prohibited.

Administration
Golden Spike National Historic Site is administered by the National Park Service, U.S. Department of the Interior. A superintendent, whose address is P.O. Box W, Brigham City, UT 84302, is in charge.

For Your Safety
Stand back from steam locomotives during operation to avoid scalding. Beware of hot and greasy parts. Do not place coins or objects on the rails. Observe speed limits and drive carefully, especially along the railroad grade. When hiking, use caution along the track area.

End of the Frontier

In an age when we can cross the country by air in five hours, it requires imagination to appreciate the historical significance of the first transcontinental railroad. The vast distance to be spanned, equal to the breadth of Europe, overwhelmed the early 19th-century mind. When Dr. Hartwell Carver first proposed the idea in 1832, it was as audacious as would have been a prediction in 1932—before TV and electronic computers—that we would all watch a human walk on the moon by 1969. Exactly a century before that event, the railroad too, in the words of a contemporary reporter, overcame "that old enemy of mankind, space."

The transformation of the western United States was wrought by two rails 4 feet 8½ inches apart, snaking across hundreds of miles of wilderness. They joined two oceans and cemented the political union of states with a physical link. But they were also a wedge through the frontier. The West belonged to the Indians and the enormous herds of buffalo on which they depended. Many Indians fought white settlement of their land, but as the railroads brought in car after car of troops and supplies, the warriors could no longer resist the army. Settlers flowed in behind and put the land to the plow, while millions of buffalo were killed. For these late emigrants, the railroad

changed what it meant to be a pioneer. A journey that had taken 6 months by ox-drawn wagon took 6 or 7 days by train. The Union Pacific built railroad stations along the way, and settlements grew up around them. Some railways sold supplies and even provided dormitories for emigrants until they could settle. Twenty years after the railroad was completed, the frontier was history.

Even before it was completed, the railroad had begun to work its changes on the West. As the railheads moved across the land, supply houses and service businesses grew up in their wakes. Some tent towns like Reno and Cheyenne sur-

vived to become respectable cities. Workers who had been trained on the railroad built towns and manned factories and mines. A major anticipated benefit of the railroad—increased trade with the Far East—never materialized. The Suez Canal was completed the same year as the railroad, and Far East goods could now be shipped to Europe faster by way of the canal than across America. But that loss was compensated for by the rapidly growing western rail trade, out of which a vigorous, interlocking economy developed. The western mountains were rich with low-grade silver, lead, and copper ores, made profitable by long trains of ore cars. They were

used by industries in the East, whose products found a growing market in the West. Western agriculture made great advances as new farming techniques, livestock strains, and machinery moved in by rail. Cash, generated by the produce shipped east, poured into the region, and budding western financiers learned how to raise money to capitalize new industry. Factories were built, and the growing industrial population provided a new market for western farm produce.

More than economically, the railroads tied the West to the eastern states. They altered the very pace of life, putting people on a schedule who

had always geared their activities to natural rhythms. National politics came west, as candidates made whistle stop tours of small towns in search of votes. As railroads made travel into the West safe and comfortable, visitors from the eastern states and Europe toured the "New America." Their sometimes exaggerated accounts of the region engendered the Old West myths that helped shape American culture. With the coming of the railroads, the West, for so long the vast, forbidding "out there," was brought into the national life.



Ute Indians watch Union Pacific crews lay track through Utah desert.

Oakland Museum

Central Pacific



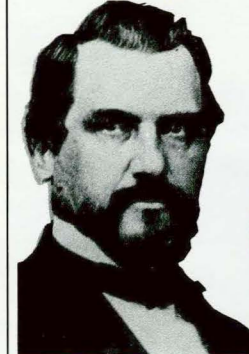
Southern Pacific



California State Railroad Museum



Stanford University



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Hopkins, and Charles Crocker. James Strobbridge, right, oversaw Chinese work crews.

Central Pacific president Leland Stanford and, from left, officers Collis Huntington, Mark



May God continue the unity of our Country as this Railroad unites the two great Oceans of the world. Engraved on the Golden Spike

What was it the Engines said, Pilots touching, head to head, Facing on the single track, Half a world behind each back? From a poem by Bret Harte



Stanford University



Kansas State Historical Society



Library of Congress

Jack Casement, far left, bossed workers on Union Pacific. Congressman Oakes Ames, left, backed

U.P., and Grenville Dodge, right, surveyed route for vice-president Thomas Durant, above.

Union Pacific

