President Abraham Lincoln signed the Pacific Railway Act into law July 1, 1862. The Central Pacific Railroad of California, chartered in 1861, was authorized to build a line east from Sacramento. At the same time, the Act chartered the Union Pacific Railroad Company to build west from the Missouri River. The original legislation granted each railroad 6,400 acres and up to $48,000 in government bonds for each mile completed. And so, The Great Race began.

Central Pacific broke ground in Sacramento, California, in January 1863. Two years later, the railroad faced a labor shortage. Many men worked only as far as the gold mines and then went their own way. Continuously looking to grow its forces, Central Pacific hired Chinese workers who were efficient and hardworking. They set a world record, laying 10 miles of track in a single day April 28, 1869.

One of the largest challenges Central Pacific faced was tunneling through the Sierra Nevadas. The railroad constructed 15 tunnels. The Summit Tunnel was the longest, at 1,659 feet through solid granite. Crews worked both ends, digging toward each other and using enormous amounts of black powder to blast through the mountains. They finished the project in 16 months, considerably less than the three years projected for completion.

Union Pacific broke ground near the Missouri River in Omaha, Nebraska, in December 1863. Nearly two years later, crews had only reached Omaha’s outskirts. It wasn’t until the Civil War ended in 1865 that there were enough laborers to make significant progress. Union Pacific’s workforce was largely made up of Civil War veterans, including railroad engineer Grenville Dodge, and Irish immigrants.

Each track mile required 100 tons of rail, about 2,500 ties and 2 or 3 tons of spikes and fish plates (metal pieces joining the rails, preventing climatic expansion and contraction). Union Pacific’s biggest difficulty lay in getting...
railroad ties, as there were few trees in the prairie. Ties were mainly cut along waterways and rivers, and transported to end of track for use.

Union Pacific’s track laying crew was managed by the Casement brothers, Dan and Jack. To efficiently handle the sheer volume of men, materials and supplies, the Casement brothers created the “City on Wheels.” Rail cars were pushed along the tracks by a locomotive, each providing an essential function – sleeping berths, dining cars, kitchens and all needed materials. Men woke up, ate breakfast and stepped off the train to begin work. A Brown’s Gazeteer reporter estimated the train and attached tent city housed 1,500 to 2,000 men and 2,000 to 3,000 horses and mules.

THE PAWNEE SCOUTS

The railroad’s arrival and Western settlement caused great changes in the Native American communities calling this region home for thousands of years. While some tribes fought against the railroad and area settlers, the Pawnee allied with the U.S. Army as scouts, working alongside men such as Colonel William Cody and Major Frank North.

THE RAILROADS MEET, UNITING THE NATION

At noon on May 10, 1869, the “Golden Spike” ceremony began with approximately 600 people in attendance. Positioned nose to nose at the end of the last rail were CP’s Jupiter locomotive and UP’s No. 119. A bottle of champagne was broken over the ceremonial laurel tie, while a telegraph went out across the nation with the simple message: “Done.” The transcontinental railroad was complete.

At that instant, in Promontory Summit, Utah, coast-to-coast travel time was reduced from four to six months to only seven days, instrumentally impacting the U.S.’s growth and development. Water stops marked the route every 25-30 miles – the distance a steam locomotive could travel before needing to refill. Each station held the opportunity for a new community to grow, immigrant families to settle and commerce to flourish.

The seven years of physically demanding and dangerous work, to which many laborers lost their lives, united the nation. Union Pacific built 1,086 miles and Central Pacific constructed 690 miles. The 46-month project cost between $110 and $120 million – today, including labor, it would cost more than $2 billion.

THE SPIKES

To celebrate the transcontinental railroad’s completion, the idea of driving home a golden spike at Promontory Summit appealed to the romantic spirit embraced by many 19th-century Americans. David Hewes, a well-known San Francisco contractor, was no exception. He ordered a spike cast of 17.6-carat gold alloyed with copper polished and engraved with the words “The Last Spike” as a gift for Central Pacific President Leland Stanford.

News of the golden spike spread quickly, and others scrambled to get a piece of the action. Four ceremonial spikes were present at Promontory Summit for Stanford and Union Pacific Vice President Thomas Durant to place into a laurel wood tie – the Golden Spike; a silver spike presented by the newly-formed State of Nevada; a blended spike of iron, gold and silver provided by the Territory of Arizona; and a second, lower-quality golden spike presented by Frederick Marriott, proprietor of a San Francisco-based newspaper. It was the first and last time all four spikes would be together. One was lost to history, while the others found separate homes. The Golden Spike and silver spike are part of the collection at the Iris & B. Gerald Cantor Center for Visual Arts at Stanford University. The “Arizona Spike” belongs to the Museum of the City of New York, but is on long-term loan to the Union Pacific Museum in Council Bluffs, Iowa.