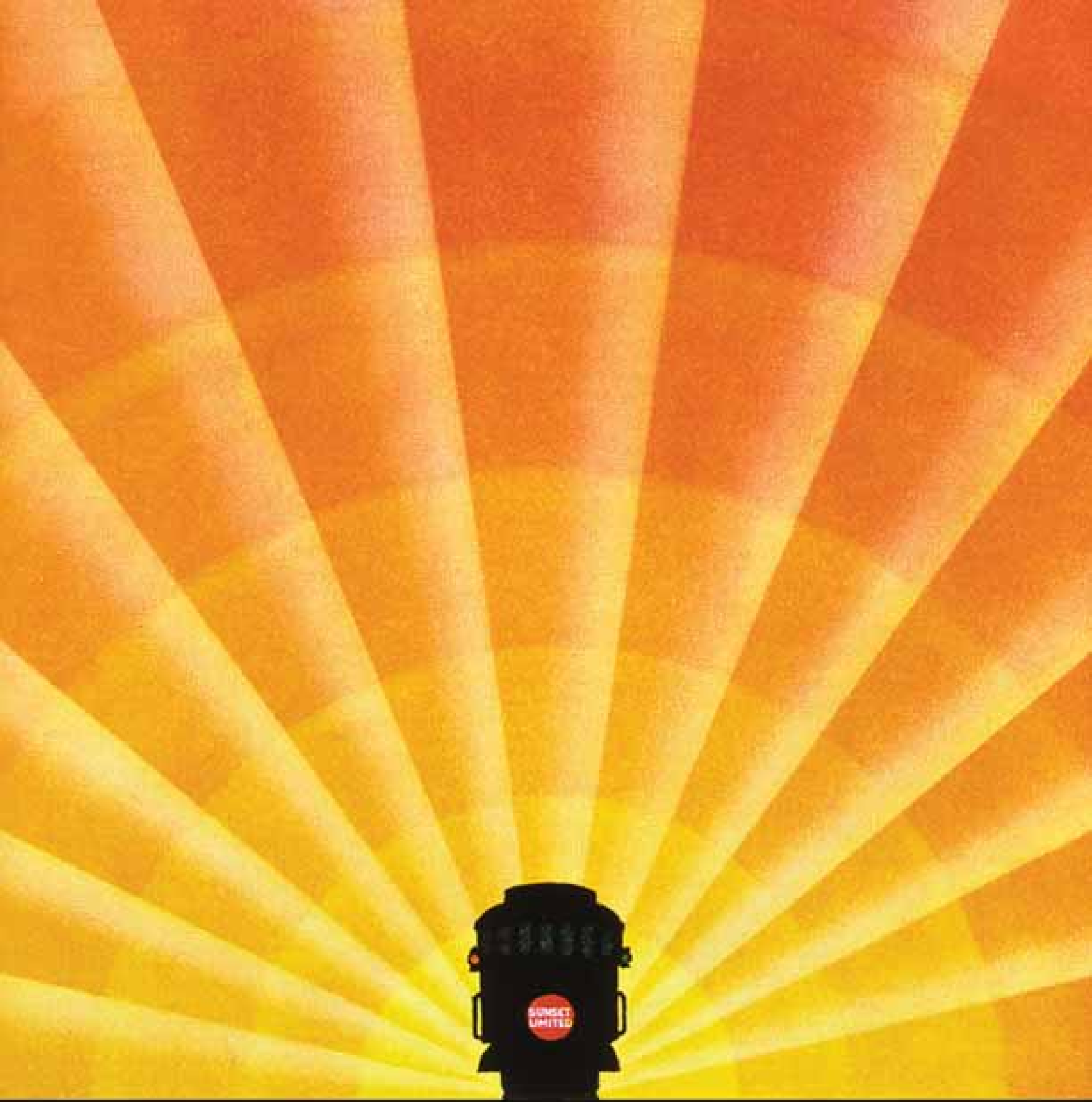

SUNSET LIMITED

THE SOUTHERN PACIFIC RAILROAD AND THE DEVELOPMENT OF THE AMERICAN WEST 1850–1930

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1 “These Mountains Look Too Ugly and I See Too Much Work Ahead”

BUILDING THE SOUTHERN PACIFIC COMPANY, 1850–1930

Origins

The railroad that by the early twentieth century would come to be called the Southern Pacific can be likened to a giant river system. Its broad, main corporate stream carried the outflow of many tributaries, predecessor companies that had risen in nearly every state and territory in the Far West and Southwest between the 1850s and the 1920s and had been acquired one by one by the parent line. Though by no means the oldest line associated with the Southern Pacific, the Central Pacific Railroad was the principal fork and the one into which all the other later-acquired railroad companies would ultimately merge. The Central Pacific originated during the turbulent times of the fading Gold Rush in California, the most populous and economically developing area of a vast territory acquired by the United States in 1848 as spoils of war with Mexico.

In the 1850s and 1860s, commerce in California labored under serious geographical burdens: immense distances separated the state from the outside world and its various parts from one other, the state’s terrain was rugged and its waterways and roads were limited and poor. All these conditions made the movement of goods and passengers slow, expensive, and unreliable. As a result, much of the state remained isolated and sparsely populated, its resources other than gold barely tapped. The cost, duration, and hazards of ocean and overland travel by wagon or stagecoach also discouraged immigration, particularly by women and children. Transportation problems were a major reason why, after the initial gold-rush spurt in the late 1840s and early 1850s, California’s population growth and economic development settled down to a sluggish pace. As mining waned after 1852 and promoters began exploring new enterprises, agitation for improved transportation increased, especially for railroads within the state and across mountains and deserts to the Middle West and East. The Central Pacific Railroad emerged from California’s quest for a solution to its transportation and related, larger economic problems.[1]

Central Pacific Railroad locomotive in the Bloomer Cut, near Auburn, California, photographed in mid-1860s by the company's photographer, Alfred A. Hart. Building the railroad over the Sierra Nevada was one of the nineteenth century's greatest engineering achievements. Courtesy California State Railroad Museum, Sacramento.

While California was being settled, steam railroads were revolutionizing society and economy in the middle and eastern parts of the United States. Beginning as early as the 1820s, prophets of Manifest Destiny envisioned a transcontinental railroad to spread settlement and civilization across the empty plains, mountains, and deserts, secure American control of the Pacific Coast, channel the fabled Asian trade through the United States, and unify the divided nation. In the late 1840s and 1850s, conventions in eastern and western cities proposed routes and promoted transcontinental railway bills in Congress. Because laying tracks across 2,000 miles of rugged wilderness was immediately recognized as beyond the ability of private enterprise, almost all plans called for heavy government subsidies. Little resulted from these initial proposals. Despite wide agreement on the desirability of building such a line and the need for government subsidy, divergent interest groups clashed over precise routes and conditions of construction. In the East, local rivalries over the route and sectional conflict between North and South stalled the project. Even Californians, ostensibly the major beneficiaries of the railway, could not agree on its location. San Francisco, Benicia, Vallejo, Sacramento, Stockton, Los Angeles, and San Diego all claimed to be the best western terminus and attacked their rivals' proposals. Local and national politics thus doomed early Pacific railway bills.[2]

Unable to get the national government to subsidize the Pacific railway, Californians in the 1850s and early 1860s turned to replacing existing stage, wagon, and steamboat routes with short railroads, some of which would one day become parts of the Southern Pacific system. Speculative and plagued by delay, incompetent engineering, nonexistent or corrupt financing, and scarce machinery and labor, most of these "railways" failed to advance from paper and hot air to steel and steam, and were never built. One exception, the Sacramento Valley Railroad, pushed its tracks from Sacramento's inland port twenty-three miles east along the American River into the Sierra Nevada foothills to the new town of Folsom and became the state's first working railroad in 1856. Affording quicker transport to the gold mines than the wagon roads then in use, the railway was an immediate success.[3] Understandably, most other early railways emerged in the San Francisco Bay Area, the state's wealthiest and most populous region. Among these, the San Francisco & San Jose Railroad spanned the fifty miles between those major cities in 1864. Other short lines radiated south and east from the East Bay port towns of Oakland and Alameda. Although laboring under poor construction, crushing debts, and opposition from rival communities and transportation companies, these early railways sparked agricultural and urban booms and strengthened the Bay Area's hold on the state's economy.[4]

Above all others, engineer Theodore D. Judah kept alive the hope that a transcontinental railroad would one day bind California and the East. Hired in 1854 by the Sacramento Valley Railroad to design and build its line, the young Judah completed the task in less than two years, a remarkable feat in those days of shaky railway ventures. Typically, however, the speculative, debt-ridden railroad halted construction at Folsom, and Judah left the company in 1856. Though naive in business matters, Judah was ambitious and persistent. Intrigued by the idea of a transcontinental railway, he became convinced that a line could be built over the seemingly insurmountable Sierra Nevada. While he scoured the mountains for a route, Judah tried to organize a new company to secure the government subsidy vital to his scheme. He authored pamphlets, addressed public meetings, harried potential investors and political figures in California, and journeyed to New York and Washington in a fruitless quest for aid from the federal government and eastern capitalists. So passionately did the young engineer pursue his dream of a railroad over the central Sierra that leery investors mocked him as "Crazy Judah." Doubting his business acumen and the feasibility of the Sierra route, they dismissed him as an impractical pest. Although Judah did succeed in keeping the transcontinental railway in the public eye, after four frustrating years he had failed to win government or private funding for his project.[5]

The Central Pacific Railroad

By the time Judah returned from the East in 1860, the lucrative mining commerce between California and the just-discovered and booming Comstock Lode of western Nevada had increased interest in a railroad across the Sierra. Controlled by a consortium of San Francisco investors, the Sacramento Valley Railroad, hoping to monopolize the trade, rehired Judah to build another rail and wagon route from Folsom through the Sierra north of Lake Tahoe to the Nevada mines. It was while he was working for the Sacramento Valley Railroad in 1860 that Judah discovered a central Sierra rail route and secretly hatched a plan to found his own company to use that route to tap the Comstock mining trade and at the same time to build the western segment of the transcontinental railroad. He settled on a path that started at Sacramento, rose seventy miles northeastward through 7,000-foot-high Donner Pass, and plunged down the Truckee River canyon to the Nevada border. Although Judah's plan would require the railroad to scale unprecedented grades, combat huge snowfalls, and bore expensive tunnels, the Donner Pass, or Dutch Flat, route was shorter than its rivals and mounted only one summit to cross the Sierra. With a definite route now in hand, Judah and a few other Sacramento and foothill men formed the Central Pacific Railroad Company in October 1860. From their own limited resources, however, they could raise only a few thousand of the $115,000 in stock subscriptions required to incorporate the company under California law. Unwisely, Judah openly sought backing from wealthy San Francisco businessmen. Not only was he rebuffed again, but the Sacramento Valley Railroad got wind of his plan. Outraged that one of its employees was promoting a rival company, the railroad fired Judah. Its bankers attacked his scheme as poorly planned and impossible to construct, thereby undermining investor confidence in the Central Pacific for years.

At this point, Theodore Judah's railroad resembled most others in California: it existed only on paper and in the mind of its promoter, and was unlikely ever to be built. To salvage his plan, Judah turned to small investors in Sacramento and other towns along the Donner Pass route. After a string of disappointing public meetings, Judah finally interested Sacramento hardware merchant Collis P. Huntington in the venture. Huntington brought in his partner Mark Hopkins, along with other Sacramento businessmen including Charles Crocker and Leland Stanford. The group agreed to buy enough stock to incorporate the company. In April 1861, at a momentous meeting at the Huntington-Hopkins store, the Central Pacific Railroad was reorganized to admit the new investors. Later, a committee that included Judah nominated and the board of directors elected Stanford president, Huntington vice president, Hopkins treasurer, and Judah chief engineer. On June 27, 1861, the Central Pacific legally incorporated and began the struggle to convert the dream into a reality.[6]

All former residents of the Northeast who had settled in California during the Gold Rush, Huntington, Stanford, Crocker, and Hopkins quickly emerged as the most powerful leaders of the new company. With their solid entrepreneurial backgrounds, the "Big Four," or the "associates," as they came to be called, brought essential business strength to Judah's struggling enterprise. Though by no means wealthy, they were respected, successful merchants whose word and credit were as good as gold. Because he knew eastern suppliers and financiers, Huntington was a particularly valuable addition. Members of the tiny band of militantly anti-slavery men who had founded California's Republican Party in 1856, the Big Four also had political influence that proved crucial in starting up the company during the Civil War. As leaders of the new party, the associates had ridden to victory in November 1860 with their party's successful presidential candidate, Abraham Lincoln. With close ties to powerful local and national Republicans, newly elected members of Congress, and officials of Lincoln's incoming administration, the Big Four wielded the political clout that Judah lacked.[7]

Ironically, the onset of the Civil War (prompted by the secession of southern states following Lincoln's inauguration as president in March 1861) improved the Central Pacific Railroad's prospects. Republican leaders controlling Congress and the White House already had favored federal aid for a transcontinental railway to encourage national economic development. Such a railroad became even more vital as part of the Union war effort. It would assure the allegiance of the frontier and strengthen military control of the Far West. At the same time, the secession of the Confederate states from the national government effectively ended southern obstruction of a northern route into California. Nevertheless, formidable obstacles still dimmed the Central Pacific's prospects in 1861. Practically every facet of the ambitious project—financing, engineering, construction, even administration and operation over such a vast territory—lacked precedent. Experts smugly predicted that the company would be unable to build a rail line over such a rough landscape, and if it could, locomotives would be too weak to haul cars over steep High Sierra grades. Even if it turned out that they could, critics predicted that the railroad would not operate reliably and profitably through the heavy snows and arctic winter temperatures of Donner Pass. Furthermore, most construction and operating equipment, including rails, cars, locomotives, and heavy machinery, would have to be shipped at great expense around Cape Horn. Wartime shortages of iron, railroad machinery, and shipping tonnage, along with the federal government's inflationary monetary policies, pushed prices high and caused wasteful delays. Finally, with construction workers scarce in California, the railroad would have labor shortages.[8]

Even using Judah's sanguine estimates, the cost of building the Central Pacific, especially the Sierra segment, would far exceed the likely federal subsidies. Their own private wealth limited, the Sacramento businessmen could expect no help from San Francisco financiers, who were already committed to steamship lines or rail competitors of the Central Pacific. Moreover, in the early 1860s, risky large-scale ventures like the Central Pacific and other would-be transcontinental railroads could raise little cash by selling stocks or bonds in the tight wartime market. Symptomatic of the Central Pacific's scant resources, the first stock subscription of 1861 brought in only $10,000 in cash, which the railroad devoted to a more detailed survey of the Donner Pass route. Funds quickly ran out, however, and Judah had to halt his work prematurely. In the summer of 1861 he returned from the mountains, bearing only the disheartening news that his original survey was seriously flawed. The rail distance through the Sierra would be 140 miles, not 115, and more than three miles of tunnels would have to be bored through hard granite. To build the line as far as Nevada would take at least $13 million, or $88,000 per mile, over 50 percent more than he had originally estimated and several times the predicted federal subsidy.[9]

To make matters worse, the Civil War's outbreak and the imminent passage of a Pacific railway subsidy act spawned a host of rival companies in California and the East vying for a share of the government's aid, including the San Francisco & San Jose and the Sacramento Valley railroads, both controlled by powerful San Francisco interests hostile to the Central Pacific. Encouraged and financed by corporate giants like the Pacific Mail Steamship, California Steam Navigation, and Wells Fargo companies, who feared losing business and federal mail subsidies to the Central Pacific, vested business interests and Sacramento's jealous rival cities joined forces to crush the city's paper railroad.[10]

Without much support outside Sacramento, the leaders of the Central Pacific, their private fortunes now committed, turned to securing crucial federal subsidies. To assure that the state would favor their company, the associates ran Stanford for governor on the Republican ticket. In September 1861 he triumphed, carrying with him a group of sympathetic Republican legislators and congressmen. Judah, Huntington, other Central Pacific investors, and congressional Republican allies sailed for the East in the fall of 1861. The Central Pacific's powerful Republican friends, along with eastern business associates of Huntington's, secured positions on the legislative committees writing the subsidy legislation and had Judah appointed clerk of both the House and Senate railway committees. Now responsible for administering the committees' business, Judah could guard Central Pacific interests while the transcontinental bill was being shaped. Through the winter and spring of 1862 Judah and Huntington lobbied furiously. To bribe legislators and leaders of other railroads, they lavishly dispensed Central Pacific stock, still worthless since the company possessed no assets. Central Pacific partisans overcame a major obstacle when they worked out a bargain with the rival San Francisco & San Jose Railroad, which agreed to drop its opposition in exchange for the Central Pacific's promise to assign it the right to build and collect the subsidy for the transcontinental segment between San Francisco Bay and Sacramento.

Judah and Huntington achieved an even more stunning victory in July 1862, when President Lincoln signed the historic Pacific Railway Act. This law empowered the Central Pacific to construct tracks from San Francisco Bay or the navigable waters of the Sacramento River to the eastern boundary of California, and the Union Pacific Railroad, a speculative eastern company, to complete the connection westward from the Missouri River. Both lines were awarded rights-of-way as well as the right to take timber and stone from the public domain for construction and grants of ten alternate sections of public land per mile constructed, in a checkerboard pattern within a swath ten miles on each side of the tracks. The act also authorized a loan to the companies of thirty-year government bonds at the rate of $16,000 per mile of track across low-elevation plains at each end of the line, $48,000 per mile in rugged mountains, and $32,000 per mile across the Great Basin. The railroads were to sell the land and bonds to raise capital for construction.[11]

Pathbreaking as it was, the 1862 act probably would never have by itself brought about a transcontinental railway. Not only was the subsidy much lower than the estimated cost of construction, but the law contained serious constraints. Each company was obligated to complete the entire line by 1876 if the other failed to build its portion, and the federal government would confiscate the assets of a company that did not meet its responsibilities. Because they were to be delivered gradually, after the railroads had already completed segments of track, bond subsidies, and especially the land grant, would not provide much start-up capital during the critical early construction years. Moreover, the government's loan of bonds was secured by a first mortgage against the railroads' property, thereby reducing the companies' own bonds to less valuable second mortgages. All of these provisions discouraged private investors from buying the railroads' stocks and bonds. As late as 1864 neither the Union Pacific nor the Central Pacific had been able to sell enough of its own securities to complete the mileage needed to qualify for the federal loans.

Aware that the Pacific Railway Act of 1862 would have to be amended, the Central Pacific sought for the moment to finance initial construction through local and state subsidies and loans secured by its personal assets. In the eighteenth and nineteenth centuries, colonial, state, and local governments, including in California, commonly subsidized new businesses, particularly transportation ventures.[12] Between 1862 and 1864 Governor Stanford and his allies pushed through many state laws favoring the Central Pacific, particularly bills that passed the legislature early in 1863 granting millions of dollars in state bonds and allowing local communities to assist the railroad by subscribing to its stock. After hotly fought local elections blemished on both sides by charges of bribery and ballot-box stuffing, the people of San Francisco, Sacramento, Placer, and other counties overwhelmingly approved the purchase of more than $1 million in Central Pacific stock. Tenacious in their opposition to the railroad, competing railway, steamship, and wagon companies and communities far from the Donner Pass route tried to get the legislature to revoke Central Pacific subsidies and extend them instead to rivals, filed lawsuits challenging the legality of state and local aid, and attempted to overturn local subsidy elections. In their abusive pamphlet and newspaper war, enemies charged that the Central Pacific's route was impractical, the speculative company would go bankrupt without completing the rail line, and its corrupt officers were interested only in absconding with the public subsidies.

As governor of the state as well as president of the railroad, Leland Stanford led the fight after 1862 to preserve the Central Pacific's privileged position. The company dispatched agents to help local supporters get subsidy referendums passed, compromised with communities lowering the amounts of their stock purchases, thwarted competing lobbyists in the legislature, and successfully defended most of the lawsuits. By 1865 the opposition had been quelled, at least for the moment, and the railroad began to receive the much-needed local money. The anti–Central Pacific campaign of the early 1860s, however, depleted the railroad's funds, reduced and delayed subsidies, and postponed the railroad's completion. Also, its own heavy-handed tactics, magnified by exaggerations and untruths hurled by partisan opponents, gave the Central Pacific a lingering reputation for corruption and ruthlessness. Many Californians thus were predisposed against the Central Pacific before it had laid even a mile of track. Born in the business and community rivalries inherent in early railway building, these suspicions laid the groundwork for later anti-railroad movements that became commonplace in the politics of California and other western states.[13]

While the battle against its rivals raged, the Central Pacific began construction in late 1862 and early 1863. Although the railroad still could not raise substantial funds, some tangible work, however symbolic, was essential to shore up public and investor confidence. The company scraped together a small amount of capital through new stock subscriptions and levies on its few stockholders, including contributions of $35,000 from each of the Big Four. In December, Crocker, in league with other railway investors, founded Charles Crocker & Co., which received the contract to build the first segment of rail line. Finally, on January 8, 1863, the first transcontinental railroad broke ground at the Sacramento riverfront, accompanied by prayers, speeches, parades, waving American flags, and the music of the Sacramento Brass Band.[14] After several months, though, work on the roadbed halted about eighteen miles into the countryside. Characteristically, grading crews became mired in the mucky Sacramento Valley earth, and the railroad again ran out of money. No tracks had been laid. In fact, the Central Pacific had no rails, cars, and locomotives—nor the cash to buy them.

In March 1863, Collis P. Huntington again went east in a desperate attempt to sell $1.5 million in nearly worthless Central Pacific bonds to purchase rolling stock and construction materials. Although the Union Pacific and other builders of eastern links to the transcontinental railroad had been able to raise virtually no capital in the stringent wartime market, Huntington, relying on old business friends and the excellent credit of his hardware firm, coaxed financiers into lending him several hundred thousand dollars, secured by some of the bonds and his personal guarantee of repayment. This was the first significant influx of outside funds into the Central Pacific. Huntington then bought rails, locomotives, and other equipment and shipped it around Cape Horn, with payment in cash, more discounted bonds, and Huntington's personal promissory notes. The Central Pacific Railroad was finally in business, though heavily in debt.

Huntington returned from the East in the summer of 1863 to find the Central Pacific in shambles. Enemies still tied up local subsidies, and some stockholders were defaulting on payments due on their subscriptions. Unless it obtained more capital, and quickly, the company could not finish the fifty miles of track needed by the November 1864 legal deadline to qualify for the federal bonds and land grants. In that case, the railroad would probably go under, taking with it the personal businesses of its founders. Under mounting pressure, the Central Pacific's leaders fought bitterly over finance, engineering, and control of the railway. The Big Four, who owned most Central Pacific stock and had already mortgaged their personal assets to begin construction, insisted that delinquent stockholders pay their subscriptions and that all investors be further assessed. Less wealthy minority stockholders, led by Judah, who had received his stock free and had little of his own money in the railroad, were equally determined that the company raise funds by further mortgaging its equipment and uncompleted roadbed. The Huntington faction countered that this added debt would crush the shaky company.

Judah also demanded absolute control over engineering and construction. Fearing that Crocker's arrangement drained profits from the Central Pacific into a company in which Judah held no stock, he blocked the letting of more contracts to Crocker & Co. The Big Four countered that the outside construction firms did shoddy work, charged higher prices, and often defaulted on contracts. Already opposed to some of the Big Four's questionable methods, Judah was furious when Governor Stanford augmented early construction subsidies by getting the state geologist to declare that the Sierra Nevada began with the first low rises seven miles east of Sacramento, instead of at the steeper grades twenty-seven miles farther east. For their part, the Big Four had long been exasperated by Judah's unrealistic cost estimates, his damaging mistakes in designing and installing roadbed, bridges, and culverts that had already washed out in floods, and his insistence on building grandiose stations while the company flirted with bankruptcy. Judah, the associates were certain, was a careless engineer and an impractical obstructionist who would ruin the railway and their personal fortunes.

In July the Huntington faction won control of the board of directors and demanded that other board members pay their stock assessments or relinquish their seats. When Judah and his supporters refused, the Big Four insisted that Judah buy them out or consent to sell his stock. Eventually, they reached an agreement. Again unable to raise cash, Judah exchanged his stock for $100,000 in Central Pacific bonds and withdrew from the board. He retained his post as chief engineer at a salary of $5,000 per year, as well as an option to buy out the Big Four for $100,000 each. In early October, Judah left by steamer to try to borrow the money from eastern railroad financiers. He contracted yellow fever while in Panama, however, and died in New York City on November 2, 1863.[15]

Relying on hindsight and the worshipful writings of Judah's wife, Anna, some historians have converted Judah into a martyr to the Big Four's greed. Some have asserted that the railroad would have been less corrupt and more public-spirited, and California better off, if Judah had gained control.[16] The evidence, however, undermines such speculations. Judah's contributions to the Central Pacific had been undeniably important. An inveterate optimist, he popularized the transcontinental railway, located a feasible route, conceived the original plan for the Central Pacific, and with Huntington lobbied through the Pacific Railway Act of 1862. However, at the time he died, Judah was only one among many would-be railroad builders, the great majority of them unsuccessful, and everything in the historical record suggests that he would never have been able to build and manage the railroad by himself. When he left California in the autumn of 1863, the Central Pacific was still a speculative railroad, indistinguishable from many that failed to survive. It owned little equipment and had yet to lay a single rail, haul a passenger or a sack of flour, or earn one cent of profit. While Judah's modest engineering talent was adequate for preliminary work, he had made some costly design errors and had yet to prove he could solve the unprecedented technical problems looming ahead in the Sierra. However passionate his vision, Judah's business skills and political influence were minimal. Particularly, he had demonstrated no ability to raise capital on his own. The Central Pacific's victories to date, as they would be in the future, were primarily in finance, administration, and politics, areas in which the Big Four's contributions were consistently more important than his. Judah also shared fully the lax business ethics for which his generation was infamous.[17] If Judah had succeeded in wresting the Central Pacific from the Big Four, the railroad would probably have quickly failed. If it had survived, it would have been in the grip of carpetbagger eastern railroad tycoons, the likes of Jay Gould and Cornelius Vanderbilt, who at least as much as the Big Four used disreputable methods and disdained the public welfare.

On to Promontory

The Central Pacific's 1863 management crisis was the nadir in its history. Though the future remained bleak, the associates resumed work on the roadbed and bridges. The company set October 26 as the date for laying the first rails in Sacramento, but it avoided fanfare. "If you want to jubilate in driving the first spike go ahead and do it," Huntington complained to an associate. "I don't. These mountains look too ugly and I see too much work ahead."[18] Even in the gloomy fall of 1863, though, the tide was beginning to turn in favor of the Central Pacific. Crews finally were driving rails through the streets of Sacramento.

On November 9, the first locomotive, *Gov. Stanford,* began shuttling supplies, work gangs, and dignitaries back and forth between the river port and the construction front. The railroad's finances also improved dramatically. Starting in September, litigation blocking the state and local subsidies began to be resolved in the company's favor. County and municipal subsidy bonds started trickling into the Central Pacific's coffers. State grants soon followed.

With the company's position somewhat bolstered, Huntington again headed east to secure all-important amendments to the Pacific Railway Act. From that time forward, Huntington spent most of the rest of his life in the East, establishing an office for his railroad in New York City, from which he directed the challenging business of financing the Central Pacific and managing its relationships with the federal government. Fending off another campaign by rivals in Washington to repeal public subsidies to the Central Pacific, Huntington struck an alliance with the Union Pacific, which was having even greater trouble raising capital and had yet to break ground. Six months of lobbying by Huntington and Union Pacific's Thomas Durant produced the Pacific Railway Act of 1864, which modified most of the burdensome features of the 1862 law. The new act extended the deadline for completing the first fifty-mile portion to 1865 and doubled the land grant to twenty alternate sections per mile, within a twenty-mile checkerboard corridor on each side of the right-of-way. Also important, the 1864 law reduced the federal bond loan to a second mortgage and allowed the railways to sell their own first-mortgage bonds equal in amount to the government subsidy, thereby doubling the companies' potential construction capital. In 1866, to finish the job faster, Congress authorized each company to build as much of the transcontinental line as it could, thus setting the Central and Union Pacifics off in a race against each other.

The Pacific Railway Act of 1864 was an important turning point for the Central Pacific. Realizing the company's superior position, its California rivals either went out of business, reoriented their lines to feed into the Central Pacific, or sold out to the Big Four. With local and federal subsidies assured, investors grew more confident. For the first time, Huntington could sell the railroad's and government's bonds, though only at heavy discounts. The Central Pacific was lucky to receive one-half the face value of the securities, although it was of course obligated to repay the entire amount, with interest. Laboring under a heavy debt with staggering interest payments, in the next few years the railroad time and again stood days or hours away from financial disaster, especially when the high costs of building over the mountains drained its resources. But Huntington established close ties with American and European bankers and railroad equipment manufacturers. Somehow, often by pledging his own or his associates' businesses or by juggling funds in deceptive ways, he always managed to come up with the money to buy supplies and cover interest payments, as

An early Central Pacific Railroad locomotive heads out over newly laid tracks east of Sacramento and the American River, ca. mid-1860s. Author's collection.

well as to ship a steady stream of machinery and material from the East by sea around Cape Horn to the railroad's construction front on the west coast.[19] The Central Pacific's credit remained spotless, and Huntington came to be acknowledged as one of the business geniuses of his era.[20]

Fueled by new capital, construction on the Central Pacific gained momentum after 1863.[21] Locomotives first hauled passengers and freight the eighteen miles between Sacramento and Roseville in April 1864.[22] Traffic was light until June, when the company completed the track to Newcastle and its subsidiary Dutch Flat Toll Road the rest of the way across the Sierra to the Comstock Lode. The Central Pacific's combined rail and wagon service immediately proved faster and cheaper than competitors, and most Comstock trade shifted to the new route, seizing much of the traffic from other free and toll roads over the mountains.[23] Income exceeded operating expenses, making stocks and bonds easier to sell. The Central Pacific looked like it might yet turn a profit.

Nevertheless, when the company tried to push its line higher into the Sierra in the winter of 1865, it again bogged down, this time because of labor problems. Few men answered the company's call for thousands of construction workers, and they often deserted quickly to the Comstock mines soon after the railroad had transported them to the mountains, particularly after a taste of toiling in deep snows at $35 per month. Having employed Chinese immigrants on the Dutch Flat Road, Charles Crocker, over the objections of some company leaders, successfully transferred the Chinese to the heavier Central Pacific work. By May 1865 the Chinese composed two-thirds of the Central Pacific's labor force.[24] So efficient were the Chinese crews that the company, after the completion of the transcontinental line, transferred them to build its extensions northward into Oregon and eastward to Texas. The railroad's Chinese workers pioneered in establishing Chinatowns in cities across the West. Many Chinese continued as construction or operations workers with the railroad for decades, the last of the original Sierra Nevada construction crewmen retiring as late as the 1920s.[25] Other immigrant groups also furnished laborers, particularly the Irish and Portuguese. About one-fifth of the Central Pacific's employees were Portuguese, with many of them remaining for long periods with the railroad after the completion of the transcontinental line. Some, such as Frank Frates, rose to positions of responsibility.[26]

Beyond Auburn, Central Pacific crews combated some of the most forbidding terrain in the country. The railroad faced a climb of 6,000 feet in forty miles over the Sierra crest, culminating in the treacherous cliffs of Donner Pass. Below-zero temperatures and forty-foot-deep snow drifts halted work for weeks at a time in winter. Weakened by illnesses and bad food and water, the workers were in summer also harried by mosquitoes "as big as hornets" and swarms of rattlesnakes whose dens had been disturbed during construction. Cave-ins and misfired explosions killed and maimed scores of men.[27] Somehow, the Central Pacific inched upward. The railway developed new construction techniques, experimented with new, more powerful explosives, and worked its more than 14,000 men in round-the-clock shifts. While the Chinese bored away at tunnels a few inches a day from both ends, or carved out narrow ledges to carry the tracks around precipices, Crocker took advantage of the Dutch Flat Road to send materials and disassembled rolling stock ahead by wagon—by sled in winter—so that work could proceed simultaneously on different fronts. To shield its line from the crushing drifts at Donner Pass, the Central Pacific in 1868 began installing miles of long wooden snowsheds, to this day a distinctive feature of this rail line.[28] All this devoured capital. Some stretches, particularly the tunnels, cost between $150,000 and $1 million per mile, and the company always teetered on the brink of insolvency. Finally, after nearly three years of strenuous mountain construction, trains chugged over the summit in November 1867.[29] They reached Nevada in June 1868, more than five years after breaking ground, but still only 140 miles from Sacramento.

Once clear of the mountains, though, the Central Pacific raced across the more moderate Great Basin terrain to meet the Union Pacific, which was itself stalled in the mountains northeast of the Great Salt Lake.[30] Although troubled by water shortages and extreme heat and cold, Crocker's experienced Chinese and European immigrant crews worked quickly and efficiently. During the next year they laid 550 miles of track, including a then-record ten miles on one April 1869 day.

On May 10, 1869, hundreds of jubilant laborers and executives of both companies joined dignitaries and reporters for a legendary event at barren Promontory Summit, Utah, north of the Great Salt Lake. After the customary prayers and flowery speeches by seemingly scores of people, Central Pacific president Leland Stanford swung his silver hammer at a golden spike fastening the last rail. Nervous and awkward, the "Governor" missed, but telegraph keys tapped out the terse message: "It is done." Wild celebrations erupted in Sacramento, San Francisco, Chicago, New York, Philadelphia, indeed worldwide. Central and Union Pacific trains from west and east rolled through the Promontory junction immediately; the first through passenger train all the way from Omaha arrived in Sacramento carrying 500 pioneer tourists and reporters on May 26. A few months later, to facilitate rail operations, the junction of the two lines was moved eastward to the established city of Ogden.[31]

The day after driving the golden spike, Stanford telegraphed to Collis P. Huntington in New York City simply: "The rails connected with appropriate ceremonies." When he read detailed newspaper accounts of the gaudy show, and especially what he saw as Stanford's self-glorifying role in it, Huntington shot a contemptuous letter to friend and partner Mark Hopkins. Hopkins, however, objected: "I regret you should speak offensively of Stanford's connection with the driving the 'last spike'—for it dont appear to me quite right or politic." Even at the moment of the associates' greatest triumph, a rift was opening between Huntington and Stanford. Widening and becoming increasingly public, it would two decades later break up their partnership.[32]

Consolidation of California Railroads

The driving of the golden spike signaled more the beginning than it did the climax of the Central Pacific Railroad's development. In California, capitalizing on the transcontinental line's potential for stimulating economic growth, promoters organized dozens of railways in the late 1860s and 1870s. Some were even built. New railways usually fell quickly into the Big Four's grasp, however. Often outgrowths of real estate schemes or designed by their promoters for quick speculation, rather than long-term efficient operation, the new railways suffered from shoddy construction, insufficient traffic, and excessive debt. Their builders were all too eager to skim off their profits and unload the shaky companies.

Moreover, the Big Four had reasons of their own for acquiring other lines. The revenues of the Central Pacific were at first disappointing. The Suez Canal, also completed in 1869, siphoned off the Asian trade. Traffic from eastern states in goods, tourists, and immigrants also failed to match predictions, in part because of a serious depression that struck California beginning in 1869.[33] In the late 1860s and early 1870s the Big Four themselves were mired in debt and anxious to sell the Central Pacific. Because of the company's immensity, its troubled finances, its massive indebtedness to the government, and the recurrent depressions of the 1870s, the associates were unsuccessful in several attempts to dispose of the railroad.[34] The only way to avert disaster, Huntington convinced his sometimes reluctant partners, was to continue to build new lines, to defeat or absorb potential competitors for California's scant traffic, and to systematize the railroads and make them turn a profit. Borrowing heavily and reinvesting profits from constructing the Central Pacific, the associates purchased most other transportation companies operating or building in California. The more lines the Big Four acquired or built, the more deeply involved they became. By the end of the 1870s, they had transformed themselves from railroad promoters and builders into railroad operators.[35]

Most California railways came under the control of the Big Four in the 1860s and 1870s. The first to fall was their old nemesis, the Sacramento Valley Railroad, whose owners sold out in 1865. In 1868 the Big Four purchased the railroads around San Francisco Bay, including the San Francisco & San Jose (the only line into San Francisco), the Western Pacific (which had received a federal land grant to build the final link in the transcontinental railroad between Sacramento and the bay at San Jose), and strategic short railways stretching southward from the East Bay ports of Alameda and Oakland. Using these lines, Central Pacific trains from the East arrived at San Francisco Bay a few months after the driving of the golden spike. In the autumn of 1869, the Central Pacific moved its rail terminal from Sacramento to Oakland, instantly transforming that sleepy village into a boomtown. Freight and passenger ferries connected the terminal to San Francisco across the bay.[36] In 1873, the Central Pacific's corporate offices and the Big Four themselves vacated Sacramento for San Francisco.

From the late 1860s into the 1880s, the Big Four continued to expand their California transportation holdings. To seize the gateway to the Northwest, the associates in 1867 acquired the California & Oregon Railroad, which was building under a federal land-grant subsidy from present-day Roseville, on the Central Pacific transcontinental line, northward to Marysville and up the Sacramento Valley toward Oregon. To reduce water competition, they reached a rate and traffic agreement with the Pacific Mail Steamship Company in 1871, and in 1874 they formed their own trans-Pacific firm, the Occidental and Oriental Steamship Company.[37] The Big Four also absorbed inland riverboat enterprises, San Francisco Bay ferries, and urban streetcar lines. They integrated some of these newly acquired rail and other transportation facilities as important main links in the Central Pacific system. Others became branch lines or closed down altogether.[38]

The Big Four's prize acquisition was the Southern Pacific Railroad. Because of severe winter weather and high elevations along the Central Pacific–Union Pacific route, a southern, low-elevation railroad just north of the Mexican border was likely one day to carry much cross-country traffic. The original owners of the San Francisco & San Jose had founded the Southern Pacific Railroad in 1865 and secured a state charter and a federal franchise and land grant to build the western end of such a southern transcontinental line, between San Jose and the Colorado River. When they purchased the unbuilt Southern Pacific in 1868, the Big Four gained control of a proposed western link in the southern transcontinental route, thus defeating their most threatening potential competition.[39]

Immediately upon acquiring the Southern Pacific Railroad, the Big Four set off to forge that link and capture the strategic crossing of the Colorado River at Yuma. Starting in 1869, they extended the Central Pacific Railroad from its current transcontinental line at Lathrop south into the San Joaquin Valley through Fresno to Goshen (reached in 1872). They also opened construction on the Southern Pacific Railroad line from San Jose southeast to Tres Piños (reached in 1873), where a precipitous ridge in the Coast Range blocked access to the railroad's federally approved route down the San Joaquin Valley. To make haste toward the Colorado River while they raised capital and solved engineering problems for a crossing of the Coast Range, the Big Four resumed construction of the Southern Pacific Railroad on its planned route south down the valley from the end of the Central Pacific's line at Goshen. Trains arrived in Bakersfield at the head of the valley in 1874.[40]

Pushing the Southern Pacific Railroad's main line from Bakersfield south over the rugged Tehachapi Mountains into southern California took two more years and required stunning engineering feats rivaling the crossing of the Sierra. To enable a leap over a four-thousand-foot pass in only sixteen air miles, engineer William F. Hood designed the famous Tehachapi Loop. The track tunneled up through a ridge and ascended sharply in a tight circle back onto the ridge and over itself. Meanwhile, to the south, three thousand Chinese workers dug the seven-thousand-foot-long San Fernando Tunnel, at the time the second longest railroad bore in the United States.[41] In exchange for a subsidy from Los Angeles, the railroad had in 1872 agreed to build through the city. With customary fanfare, Charles Crocker connected Los Angeles to the state's northern railway system and the Central Pacific's route to the east when he drove the last golden spike near present-day Palmdale in the Antelope Valley on September 5, 1876.[42]

While the Southern Pacific Railroad was approaching the city, the associates had acquired most other Los Angeles railways, including the strategic Los Angeles & San Pedro from the city's downtown to its harbor at Wilmington, more than twenty miles to the south. Shortly later, they added the Los Angeles & Independence, which ran from the ocean at Santa Monica eastward to downtown, heading eventually toward the Owens Valley silver mines several hundred miles northeastward.[43] By the time Southern Pacific trains arrived from the north in Los Angeles, the associates had already begun extending the railroad eastward from the city across the cattle ranches in the valleys of San Gabriel and San Bernardino (reached in 1874) and the parched Colorado Desert and below-sea-level Salton Sink (reached in 1876), founding new towns and water stations as they went. Determined to beat other railroads to the critical river crossing, the Southern Pacific bridged the Colorado before the federal government had given its approval, and in the autumn of 1877 steamed into Yuma, Arizona Territory. Eager to become a rail terminal, the desert village had granted the company land for right-of-way and station.[44]

Originally, the Big Four had intended eventually to complete the challenging and expensive Southern Pacific Railroad segment from Tres Piños across the Coast Range to Goshen in the San Joaquin Valley. Once in operation, however, the combined Central–Southern Pacific line south from Sacramento and Lathrop to Bakersfield and Los Angeles proved sufficient to carry north-south traffic through central interior California, and the gap was never closed. Instead, without federal bond or land subsidies, the associates concentrated on building the even more difficult route south from San Jose through the Salinas Valley and coastal cities to Los Angeles. The Southern Pacific Railroad's famed "Coast Route" through the Salinas Valley opened in sections beginning in the 1870s, reached San Luis Obispo from the north and Santa Barbara from the south in the late 1880s, and was finished in 1901.[45]

Already by the end of the 1870s the Big Four effectively monopolized California transportation. Capitalized at $225 million, their California railroads in 1877 had 2,340 miles of track, including 85 percent of the rail lines in the state and all the important ones in the San Francisco Bay Area, Los Angeles, and the Sacramento and San Joaquin valleys. In addition to their main lines, the Big Four had extended many branches into almost all settled areas of the state.[46] The Central Pacific Railroad's leaders also controlled two transcontinental rail connections in California, one completed, the other in progress. Their successful enterprises had brought the associates great fortunes. From modest beginnings as Sacramento shopkeepers, the Big Four now ranked among America's richest and most powerful business leaders. In the 1880s, the Big Four built or acquired large railroad properties in Oregon, Arizona, New Mexico, Texas, and Louisiana, although they were never able to dominate markets in those states as completely as they did in their home state.

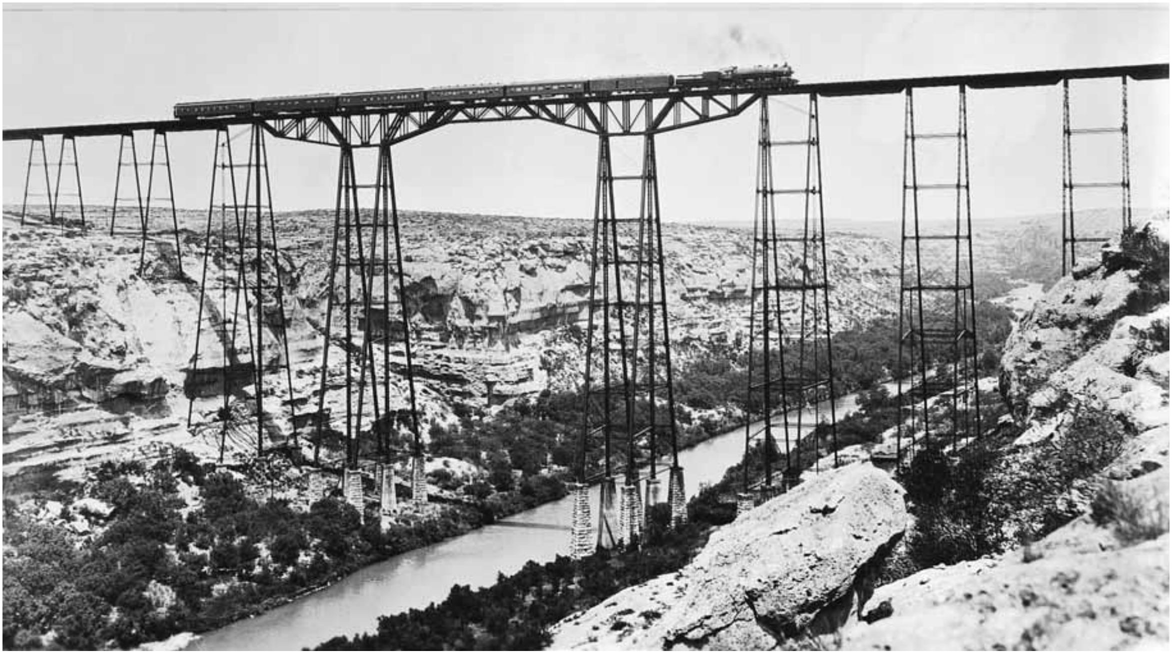
Its California origins left a lasting mark on the Big Four's rail system. Conflicts during the 1860s and 1870s between the Central Pacific and rivals over the control of routes, terminals, government subsidies, rail services and rates, and influence over public policies left a legacy of animosity toward the company. Sometimes justified, sometimes sour grapes, the sense of disaffection and grievance against the Central Pacific among some regions and economic interests fueled anti-railroad political movements and spread from state to state as the company expanded. Also complicating the Central Pacific's political situation were its financial subsidies and especially its numerous land grants, which, as will become clear in subsequent chapters of this book, entangled the company with the government to an extent unusual for a private enterprise in the nineteenth century.[47] Henceforth, federal, and to a lesser extent state, policies greatly affected the railroad's fortunes, drawing the company deeply into lobbying and partisan politics and keeping it vulnerable to criticism and opposition. Finally, the Central/Southern Pacific was the only major American railroad that built from west to east. It introduced and consolidated its business practices initially in California, its most populous and advanced region, before expanding outward. The railroad's founders and most of its later top executives and, importantly, its middle-level managers were Californians, often longtime residents. With remarkable tenure in their positions, these men identified their company's interests with those of their home state, its economic, social, and cultural development, and secondarily with the larger West. Thus, the railroad's character as a Californian, and to a lesser extent western, enterprise was stamped from its beginning. In many ways, although the Central/Southern Pacific extended operations into the Southwest, the Pacific Northwest, and internationally, and despite its longtime corporate office in New York, and even during the period when it was controlled from outside by the Harriman Lines from 1901 to 1913, it remained a California-based company.

Expansion beyond California

"A rail line that should stretch straight way across the continent," Huntington had long believed, would be the "natural" culmination of railroad development. After years of Huntington's haranguing, his debt-phobic partners finally relented and agreed to make the Southern Pacific Railroad into that single national transportation system.[48] In 1879, to the consternation of eastern railroad moguls such as Tom Scott and Jay Gould, who coveted the southern transcontinental route for themselves, the Southern Pacific Railroad began building eastward across southern Arizona and New Mexico without a federal subsidy or land grant.[49] Overcoming grievous shortages of water for crews, passengers, and locomotives, it advanced to Tucson in March 1880 and the following December to Deming, New Mexico. There, in early 1881, the oncoming Atchison, Topeka & Santa Fe Railroad connected to the Southern Pacific, completing the second transcontinental route; the first through-trains over the line from the Middle West arrived in California in March.[50] In May 1881 the Southern Pacific's Chinese track-laying crews arrived at El Paso, Texas, a major rail crossroads, with access to direct routes connecting to the Gulf Coast and Atlantic tidewater.[51]

For several years Huntington had been moving toward control of a network of Texas and Louisiana railroads from El Paso eastward. Anticipating the day when his company would possess its own transcontinental route, starting as early as 1878, he quietly began investing in the Galveston, Harrisburg, & San Antonio Railroad, which was slowly building westward from the Galveston-Houston harbor toward El Paso through San Antonio, which it had reached in 1877. Huntington increased his holdings in that and other railroads as opportunity arose, until in the early 1880s his interests allowed him to take over these lines one by one and begin their consolidation into a system. Having just gained control of the line, the Southern Pacific's associates in 1881 set about completing the Galveston, Harrisburg, & San Antonio's long segment between San Antonio and El Paso. They quickly laid tracks eastward from El Paso to take the only pass into the city from the east. On the basis of that strategic move, Huntington in November 1881 could impose a momentous and favorable truce agreement on rival Jay Gould's Texas & Pacific Railroad that conceded to the Southern Pacific a large rail empire in central and southern Texas. After more than a year of grueling construction over hundreds of miles of rugged country, highlighted by the erection of a spectacular bridge over the three-hundred-foot-deep Pecos River gorge, the last spike on the El Paso–San Antonio line was driven on January 12, 1883.[52] In early 1883, Southern Pacific locomotives entered Galveston-Houston and New Orleans on the Galveston, Harrisburg, & San Antonio and associated lines, completing the first coast-to-coast railway under one management. The first through passenger trains between San Francisco and New Orleans left those two cities to traverse the Southern Pacific's famed "Sunset Route" on February 5, 1883.[53]

Ultimately, by 1883, the associates controlled not only the Galveston, Harrisburg, & San Antonio, but the Houston & Texas Central and the pivotal Texas & New Orleans between Houston and Lake Charles, Louisiana, which connected Galveston-Houston to the Mississippi River and the major Gulf port at New Orleans. Continuing to extend these and to acquire other lines, by the early 1900s the Southern Pacific's Atlantic System, resembling what had happened earlier in California, combined dozens of railroads in Texas and Louisiana, with more than 3,000 miles of track.[54] Crucial was Huntington's 1883 acquisi-



In west Texas, the Southern Pacific's famous new Pecos River High Bridge (shown ca. 1900) replaced the strategic original structure in 1892. Author's collection.

tion of the New Orleans-based transportation empire assembled by Charles Morgan, including his Louisiana & Texas Railroad and the Morgan Line steamship company. The Morgan company provided the Southern Pacific Railroad's trains direct passenger and especially freight connections from New Orleans and Texas harbors to the Caribbean, New York, other east coast ports, and Europe. When consolidated with their California-based and other Texas holdings, the Morgan Line gave the associates' transport system global reach, including not only extensive regional trackage throughout the west coast and Southwest, but multiple rail and rail/sea transcontinental connections, several of which were under their sole management and free from winter snow blockades such as frequently shut down northern railroads. The reach of their railroads extended beyond the American shoreline, via trans-Pacific steam-shipping lines to Latin America and Asia and trans-Atlantic lines to the Caribbean and Europe.[55] The Central/Southern Pacific associates' acquisition,[56] beginning in 1884 and completed in 1887, of the Oregon & California Railroad,[57] connecting their California & Oregon Railroad in the northern Sacramento Valley to Portland and the Columbia River, and the subsequent absorption of other Oregon lines, rounded out their unrivaled western railroad empire.

The Southern Pacific Company

The Southern Pacific's mushrooming business empire caused acute management problems for the Big Four. They generally did not fully merge new lines into the Central Pacific, but owned them in partnership and controlled them by varied, complicated leases to the Central Pacific Railroad or stock-holding arrangements that proved unwieldy, particularly after the addition of the Texas and Louisiana railroads. Confusion was compounded because some states and territories prohibited out-of-state companies from operating railroads within their jurisdictions. Thus, just to build their southern transcontinental line, the associates had to create separate Southern Pacific Railroad companies in California, Arizona, New Mexico, and Texas. Also, large construction and acquisition outlays sapped the railroad's financial resources, as did declining traffic caused by the collapse of Nevada silver mining and competition from the newly completed Atchison, Topeka & Santa Fe and Northern Pacific roads. Revenue per mile of the associates' rapidly expanding railroads fell steeply from 1881 to 1884, driving their enterprise close to insolvency.[58]

To improve management, increase earnings, and provide a better mechanism for distributing traffic, expenses, investment capital, and profits among their far-flung lines, Huntington convinced his partners in 1884 to set up a holding company, the Southern Pacific Company. To broaden the holding company's powers and insulate it from legal and political attack in the West, it was incorporated under the benevolent laws of Kentucky. In early 1885 the associates transferred railway stock and leases to the new Southern Pacific Company.[59] The venerable, but financially vulnerable, Central Pacific Railroad, now an isolated entity and no longer leasing and operating the Southern Pacific Railroad companies and the other affiliated lines, was also leased to the holding company. The new arrangement had the added advantage of affording a better shield for the associates' other railroads from a threatened congressional takeover of the Central Pacific to collect on its still-unpaid debt to the federal government. Quickly, the Southern Pacific Company's corporate name and identity came to subsume those of its controlled lines. The Southern Pacific Company operated from headquarters in San Francisco. Initially, Leland Stanford served as president, but, to Huntington's mounting disgust, he was becoming increasingly absorbed in his Washington, D.C., duties as a newly elected U.S. senator from California. As company vice president, Huntington directed the finance and lobbying office in New York City, with long visits to San Francisco and other Southern Pacific centers once or more each year.[60]

In 1890, years of simmering bad blood between the two surviving members of the Big Four finally boiled over. Huntington had long been exasperated by Stanford's public posturing, by his lavish displays of wealth, and especially by his laxity, indeed laziness, in attending to business matters, which had frequently hurt the company financially and politically. The last straw fell in early January 1890. Huntington was livid when Stanford started campaigning in the California legislature for reelection to the U.S. Senate. Not only did he think that Stanford's electoral antics exposed the company to reprisals, Huntington had already promised the Southern Pacific's support to A. A. Sargent, the company's longtime political friend.[61] At the early 1890 meetings of the board of directors of the Southern Pacific Company, Huntington, after securing the acquiescence of the Crocker and Hopkins interests, forced his own election as president by threatening to release damaging political documents regarding Stanford's first senatorial election. Then, although all parties to the deal had agreed to refrain from public calumny of each other, in his April 1890 presidential acceptance speech in San Francisco, Huntington openly attacked Stanford for having neglected his business duties and for jeopardizing the Southern Pacific's interests by his dallies in politics. Although the legislature did return him to the U.S. Senate, the embittered Stanford withdrew from active management of the Southern Pacific. He died three years later.[62] Combined with the deaths of Hopkins in 1878 and Charles Crocker in 1888, Huntington's ouster of Stanford gave him dominant control of one of the nation's and the world's largest business enterprises. He remained as president until his own death in August 1900.

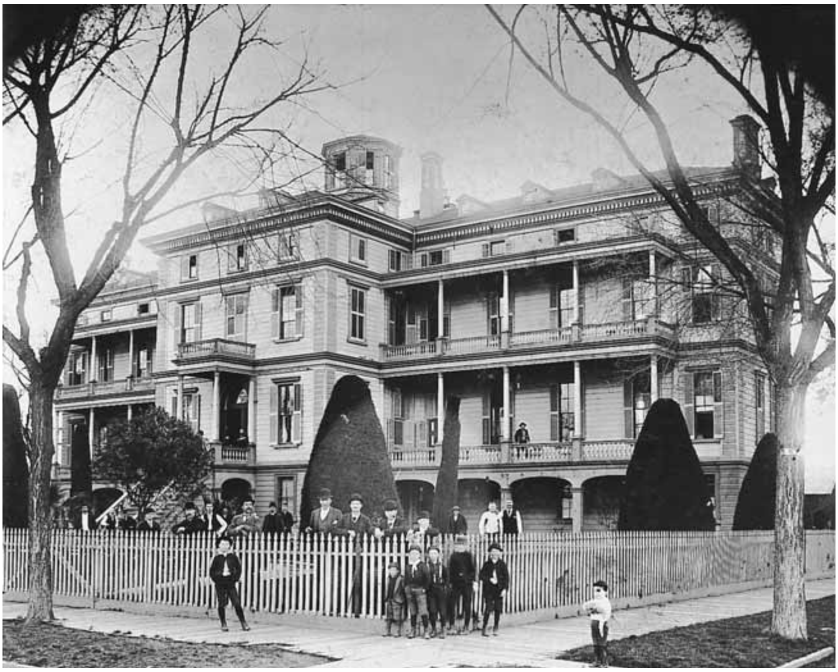
In the decade and a half following its founding in 1884, the Southern Pacific Company modernized and integrated the Big Four's holdings for more efficient and profitable operation. Much of the new company's organizational success resulted from a transfusion of new executive blood. Increasingly under Huntington's sway even before his ascension to the presidency, the Southern Pacific Company selected and groomed an elite corps of middle-level executives, most of them handpicked by Huntington, and then delegated them authority to run company affairs in their departments.[63] Young men at their initial appointment, the Southern Pacific's middle-level leaders attained great longevity with the company, moved up in responsibility, and lent remarkable effectiveness and continuity to corporate policy into the early twentieth century. First, to improve day-to-day operation of the Southern Pacific's some five thousand miles of railroads in dozens of companies, as well as extensive steam-shipping lines, and to make them run as one rail/sea network, management in 1885 was centralized into two massive systems. Assuming charge of lines west of El Paso, the Pacific System was headquartered in San Francisco and directed by the Central Pacific's capable longtime general manager, Alban N. Towne, a respected and popular confidante of Huntington.[64] An Atlantic System took control east of El Paso, from an office in New Orleans under A. C. Hutchinson, a former Morgan Lines executive whom Huntington had brought into top management.[65]

Other changes systematized operations and extended policies over the entire company. From his office in San Francisco, the Southern Pacific Company's traffic manager, J. C. Stubbs, undertook to rationalize traffic movement among the transportation lines. Especially, Stubbs faced a bewildering diversity of freight and passenger tariffs and policies of the many subsidiaries, each with varied capitalization, debts, and operating costs derived from different terrains and traffic densities. The rate-setting problem, which business historian Alfred D. Chandler has maintained was at the time "much more complex than physically linking the roads," proved especially formidable for the country's first truly nationwide and international transportation system.[66] Stubbs had to reconcile divergent internal corporate needs, as well as contradictory outside business and political pressures. Nevertheless, he installed improved schedules of local, transcontinental, and international rates to better recoup costs and assure profits for the company's affiliated lines, while still encouraging business and agricultural development in the Southern Pacific's hinterland. He moved to shorten east-west transit times and increase business volume and profits, while overcoming the obstructionism of the Union Pacific and other eastern lines that gave low priority to and delayed west-coast freight bound for the Central Pacific. Stubbs took advantage of the company's new acquisitions and developed rates and routings for west-bound transcontinental traffic originating in the Atlantic Coast or the Middle West that diverted it southward to the Southern Pacific's wholly owned rail/sea routes via New Orleans and Texas. Also, through the 1880s and 1890s, Stubbs lowered overall Southern Pacific rates, in part to encourage more traffic, in part because of the company's increased efficiency and competition from other railroads. The Southern Pacific Company's traffic and profits improved dramatically after 1885, and Stubbs became renowned in his profession. In 1904, E. H. Harriman, after he had taken over the Southern Pacific, elevated Stubbs to traffic director of the entire Harriman Lines system.[67]

First appointed chief agent of the company's federal land grants in 1883, William H. Mills took charge of promoting colonization and subdividing, developing, and selling the public land grants of newly added railroads, as well as private properties purchased by the associates. One of his first activities after the formation of the Southern Pacific Company was to travel to Texas, evaluate the unsold state lands there granted to predecessor railroads, and make recommendations to Huntington regarding their development and sale. In the 1880s and 1890s, Mills emerged as one of Huntington's most trusted executives, influential in establishing the Southern Pacific's land, water, agricultural, promotional, and resource-conservation policies that prevailed into the mid-twentieth century. From 1883 through 1900, Mills also served as Huntington's principal political and press-relations adviser.[68]

Also indicative of the Southern Pacific Company's early expansion and systematization was its employee health-care and hospital program. As it was building the transcontinental line in the mid-1860s, to further company loyalty, reduce employee turnover, cope with the severe injuries common in railroad work, and compensate for the lack of medical services over much of its territory, the Central Pacific Railroad began contracting with leading physicians in settlements along its tracks to form a network of "railroad surgeons" to treat injured and ill workers. At some especially important, though remote, rail towns, such as Truckee, a major operations center in the High Sierra, the company itself hired a physician and opened a railroad medical office and pharmacy. Often, the railroad's physicians also provided the first professional services to other residents in fledgling frontier towns.[69] As early as 1867, to supplement this "on-the-road" care, the Central Pacific founded a hospital for employees at Sacramento, temporarily housed in a former orphanage at Thirteenth and D streets. Meanwhile, the railroad constructed a four-story permanent building, a quarter of a city block in size, that would become one of the largest, most up-to-date hospitals in the American West. When it opened in early 1870, with its six wards and eight private rooms, the new Central Pacific Hospital could accommodate 125 patients. The railroad recruited well-educated, research-oriented physicians from across the country to staff its hospital, and in the late nineteenth century it became an important innovator, responsible for introducing into the West new medical theories and procedures, including antiseptic surgery. The Central Pacific's was one of the first comprehensive industrial hospitalization and compulsory health-care insurance programs in the United States, and the first in the world for a railroad. Beginning in 1867, all employees were eligible for free medical attention and hospitalization, either on the road or in Sacramento. All, including top executives, paid premiums of fifty cents per month, automatically deducted from their pay.[70] The company also transported employees free by rail to the road surgeons' offices or the Sacramento hospital.[71]

When new railroads joined the Central Pacific system, their employees entered the medical care program, as did the company's retirees. In 1883, the Sacramento facility treated 3,313 railroad employees and retirees, thirty of whom died at the hospital.[72] After the holding firm's founding in 1884, the Southern Pacific Company extended the health-care insurance and hospitalization program to the Atlantic System and created a hospital department, administered directly under the president. In 1887, the Sacramento facility was renamed the Southern Pacific Railroad Hospital. As the company's workforce increased and its territory expanded beyond the reach of Sacramento, the Southern Pacific negotiated agreements with private hospitals to treat its employees in other cities, including by the early 1890s San Francisco, Oakland, Los Angeles, Tucson, and



The Central Pacific Railroad Hospital, Sacramento, ca. 1892. Author's collection.

Portland. In 1899, the Sacramento facility now considered cramped, outmoded, and remote from the company's headquarters, the Southern Pacific Hospital moved into a new, larger building near the railroad terminal in downtown San Francisco. Three additional structures on the site housed doctors, interns, nurses, and hospital employees.[73] By the end of the nineteenth century, mobile medical cars were supplementing the work of the main and satellite private hospitals at especially remote construction or operations sites. In 1911, the company opened a general hospital in Houston, and another at Tucson in 1924. Employees' monthly insurance payments remained at fifty cents until raised to seventy-five cents in 1922 and one dollar in 1927.[74]

Over the early decades of the twentieth century, the railroad expanded its employee health-care program into a region-wide network of company-owned general hospitals and smaller emergency hospitals, hospitals the railroad managed for other agencies, and private hospitals under contract to care for railroad employees. Overall by 1950, the Southern Pacific owned, managed, or contracted for service at more than fifty hospitals, annually providing company workers with 195,000 patient-days of care and 520,000 out-patient visits.[75] In the 1960s and 1970s, after more than a century as one of the nation's largest medical providers, the railroad gradually closed down the hospitals or spun them off as independent institutions and shifted employees onto company-financed private insurance plans. By then, however, the Southern Pacific's insurance and hospital program had not only cared for hundreds of thousands of workers, but had also served as the model for the industry. Following the company's example, other railroads built hospitals and adopted universal health care for employees and retirees.[76]

Most instrumental, save Huntington, in the Southern Pacific Company's early organization was William Mahl. Although, like many of the company's powerful middle-level executives, he has been all but ignored by historians, contemporaries recognized Mahl's importance. "His was the analytical mind which permitted the carrying out of the dreams of Mr. Huntington in an economical and scientific way," *Railway Age* concluded about Mahl's career upon his death in 1918. Having emigrated as a child from Germany to Texas, Mahl rose quickly from a teenage shop's apprentice to become auditor, purchasing agent, and later general superintendent of several Texas and Kentucky railroads. Huntington got wind of his growing reputation and in 1882 brought the thirty-nine-year-old protégé to Huntington's New York City office. Until Huntington's death in 1900, Mahl served in various capacities as general agent, comptroller, or special assistant to the president in all the magnate's railroads.[77]

When the Big Four founded the Southern Pacific Company in 1885, Huntington set Mahl to introduce order into the chaotic books of the many subsidiary railroads. Mahl spent up to half of each year in residence in California, Texas, and Louisiana, systematizing the finances of the Southern Pacific's lines to assure that short- and long-term costs and profits could be accurately identified, measured, predicted, and distributed efficiently among the various units. Regularizing the books also generated additional capital for expansion and modernization.[78] Insisting, in *Railway Age*'s words, on "utmost precision" and "absolutely uncompromising honesty" in his and others' work, Mahl set up coherent and comparable accounting procedures for the companies, converted all their annual reports into accurate financial summaries that could be relied on in management planning, and raised the credit ratings and stock and bond values of the Southern Pacific Company and subsidiaries.[79] To improve Southern Pacific fiscal management, Mahl also conducted elaborate studies of other railroads so that his firm could emulate their successful procedures, and avoid their mistakes.[80]

It was Mahl who in the late 1880s and early 1890s transformed the Pacific Improvement Company into an important instrument of finance and stability for the rail lines. A private firm created by the Big Four in 1878 to take over railroad construction and property management from the earlier Charles Crocker and Contract and Finance companies, the Pacific Improvement Company has, like Mahl, been largely ignored by historians. Yet, it was an integral ingredient in the Southern Pacific's success. Under Mahl's tutelage, the Pacific Improvement Company continued to own, manage, and develop the various mining, streetcar, utility, town-site and rural real-estate subdivisions, and resort holdings of the Southern Pacific and its owners. In addition, the company began actively to furnish capital and insulate the railroad end of the business from the vagaries of money markets. The company advanced the railroads funds for construction and expansion, receiving in return stocks and bonds in the railroads and leaving those companies with low outstanding debt and high creditworthiness. The Pacific Improvement Company then held the securities, waiving dividends and interest payments while rail profits were low, and sold only when the price was high, usually much later, when the railroads' earnings had increased. The money was then redistributed to the rail lines and the owners as profit and additional construction capital. It was this arrangement, according to Mahl, that made the Southern Pacific Company and its affiliated railroads financially stable and especially kept them out of receivership during the great depression in the rail industry following the Panic of 1893, although the Pacific Improvement Company itself was hard pressed to meet its obligations. As it turned out, building and financing the rail lines turned extremely low profits to the Pacific Improvement Company, according to Mahl, and the company performed those functions as a service to the railroads, with the company's sizable earnings continuing to come from its real estate developments. Mahl managed the assets of the Pacific Improvement Company from 1889 until Huntington's death in 1900.[81]

In 1897 and 1898, as had become commonplace for him, Mahl accomplished something the Big Four interests had tried many times and failed to do, a much-needed full accounting of the Pacific Improvement Company and a separation of its assets and liabilities from the Southern Pacific Company's.[82] In 1899, Mahl's assistance was also important in helping Huntington reorganize the precarious finances of the Central Pacific and fund its nearly $59 million construction debt owed the federal government and due that year. The Southern Pacific Company assumed the obligation, receiving Central Pacific stock in return, reached an agreement with the government to make semi-annual payments, and retired the debt in full in 1909. The settlement averted receivership for the Central Pacific and paved the way for long-term stability and modernization for the entire Southern Pacific system.[83]

William Mahl became perhaps the only person who understood the Southern Pacific in its entirety, as well as in its minute complexities. No fiscal detail escaped his scrutiny. For instance, he devised a scheme for classifying all disbursements systemwide, so that even minor costs could be identified and controlled. Perhaps most ingenious were the procedures he developed for systemwide inventory, purchase, deployment, and rotation of heavy equipment so that, in his words, "greatest good would be derived by the property as a whole."[84] When, for example, new locomotives were needed by companies operating over gentle terrain, with easy grades, as in east and south Texas, Louisiana, and California's Central Valley, he transferred there the older locomotives from lines with steeper grades, such as over the Sierra Nevada or Tehachapi Range. Those locomotives he then replaced with the latest, most-powerful models. Similarly, Mahl rotated older cars to roads with less traffic and purchased new, modern cars for the busier lines. Rolling stock lasted longer, immense maintenance and purchase costs were saved. Particularly, Mahl, as he put it, lavished "time and attention to the development of the weaker properties," shifting to them concessions in rates and terminal charges from the prosperous lines, "thereby improving their showing and making them an asset and future basis of credit."[85]

Mahl was, indeed, the principal fiscal and organizational architect of the Southern Pacific Company's success—its modernization, its continued expansion, and most of all its welding of one transportation network out of a series of separate, contiguous rail lines. His work was instrumental to making the Southern Pacific the most financially stable of all major nineteenth-century railroads, and the only one to avoid bankruptcy and receivership. With unusual insight, for Mahl operated mostly beyond public scrutiny, the anti–Southern Pacific *San Francisco Examiner* in 1895 noted about this "expert accountant" and "shrewd judge of men" that "no one is closer than he is to Huntington. He knows more of Huntington's business than any other man living, and his authority to examine into all railroad matters is absolute."[86] Even Huntington, who was not given to effusive personal praise, acknowledged to Mahl that "as you know, I depend almost entirely upon you in such [financial] matters."[87] After E. H. Harriman took over the Southern Pacific in 1901, William Mahl became vice president and comptroller of the Union Pacific and Southern Pacific systems and, in the eyes of many contemporaries, his era's most celebrated railroad financial officer. He retired because of illness in 1913, also the year the Southern Pacific separated from the Harriman Lines.

Other important future leaders of the Southern Pacific emerging to prominence between 1885 and 1900 under Huntington's management included William F. Herrin, who was named Mills's successor as political coordinator in the late 1890s and then vice president and general counsel from the early 1900s until his death in the 1920s.[88] James Horsburgh, Jr., joined the Passenger Department and became passenger agent and director of promotion after 1900, remaining in that position until 1915.[89] Sent by Huntington from the Atlantic System, Julius Kruttschnitt was Towne's replacement at the head of the Pacific System upon his death in 1895. Ultimately, Kruttschnitt became one of the most important executives of the Harriman Lines after 1900 and chairman of the Southern Pacific after its separation from the Harriman Lines in 1913.[90] William R. Sproule, longtime Pacific System president after 1911, also first joined the executive corps in the 1880s and 1890s.[91] Henry E. Huntington, appointed by his uncle in 1892 as special representative of the president in San Francisco and later in the 1890s as vice-president, went on to become a key figure after 1900 in the development of the Pacific Electric interurban railway, ultimately a Southern Pacific subsidiary in southern California.[92] Epes Randolph, whom Huntington dispatched in the mid-1890s from his personally owned Kentucky railroads to take charge of the Southern Pacific Company's division headquartered in Tucson, in the early 1900s became also the president of the Southern Pacific de Mexico and the Pacific Electric.[93] Indicative of the significance of these men in the Southern Pacific, they all sat near Collis P. Huntington at the president's annual sumptuous banquets for executives and California dignitaries in the 1890s at San Francisco's Palace Hotel or Huntington's mansion atop Nob Hill.[94]

From the mid-1880s through the early 1900s, the Southern Pacific Company continued to expand by extending local branches of its rail lines into new territories, building new major throughways, and adding other railroads to its empire. In addition to the Oregon & California Railroad, acquired and finished between 1884 and 1887, the company in 1887 gained control of the South Pacific Coast Railroad, a narrow-gauge connecting east San Francisco Bay communities through San Jose and Los Gatos and over the redwood-rich Santa Cruz Mountains to tap fishing, logging, and recreational traffic on Monterey Bay at the city of Santa Cruz.[95] Also in California, new branches of the Central Pacific and California & Oregon were added in the Sacramento Valley, including one in 1887 into the emerging fruit-growing region in the Capay Valley, west of Sacramento. The Southern Pacific Railroad built a second north-south line in the San Joaquin Valley, down its west side, along with other branches in the valley, and continued to open new segments of its Coast Route between San Francisco Bay and Los Angeles, completed in 1901. In 1903–1904, the railroad extended a spur south from its mainline in the Colorado Desert to the Mexican border town of Calexico to tap the rich agricultural potential of the Imperial Valley.[96] During the 1880s and 1890s, the Southern Pacific expanded into Mexico, buying and then extending the Mexican International Railroad Company south from Piedras Negras (Eagle Pass, Texas) to Durango and leasing the Sonora Railroad from Nogales, at the Arizona border, south to the Gulf of California port at Guaymas.[97] Other railroads also continued to be added to the Southern Pacific's system in Oregon and Texas, until the company dominated large shares of the transportation markets in those states.[98]

Harriman Lines Interlude

When Collis P. Huntington died suddenly on August 13, 1900, the Southern Pacific Company, with nearly ten thousand miles of rail line and more than sixteen thousand miles of steam-shipping routes, was the world's largest transportation corporation.[99] In the power vacuum left in Huntington's wake, management was confused and drifted under new board chairman Charles H. Tweed and president Charles M. Hayes. Banking interests, particularly Speyer & Company of New York, which now held the former Stanford shares, grew in power within the company, pressing for a change in leadership and ownership. Desirous of liquidating their immense holdings when Henry E. Huntington failed in his quest for the Southern Pacific's presidency, Collis's heirs soon put much of their stock up for sale through Kuhn Loeb & Company in New York. By the spring of 1901, after complicated financial maneuvers with Kuhn Loeb, railroad empire-builder Edward H. Harriman, who already controlled the Union Pacific and the Illinois Central, owned nearly 50 percent of the Southern Pacific's stock, purchased through the Union Pacific, enough to secure firm power over the line's affairs. He soon had himself elected president. Harriman's motives were varied—increasing his influence in the Southwest, preventing rivals from acquiring the Southern Pacific, his passion for building the largest rail combination around the Southern Pacific and the companies he already controlled, and the simple challenge of improving the management and physical plant of railroads. Undoubtedly also important was fulfilling the Union Pacific's long-cherished ambition to possess for itself the Central Pacific's old connection from Ogden west to San Francisco Bay, thus gaining sole control of the entire transcontinental route.[100]

The interlude from 1901 to 1913, during which the Southern Pacific was controlled by the Union Pacific and the new Harriman Lines combination, has been fully analyzed by able railroad business historians Don Hofsommer, Lloyd Mercer, and Maury Klein, and it is not necessary to go into detail here.[101] The standard interpretation of the Harriman Lines' impact on the long-term development of the Southern Pacific is that E. H. Harriman's more modern business methods and huge capital resources produced a sort of coming of age of the Southern Pacific, a period of growth, standardization, and modernization of physical plant and management. Harriman had taken over the Union Pacific only in 1898, Klein observed, yet in a few years had "rebuilt the line, reorganized its management, reacquired its lost subsidiaries, and turned it into one of the most profitable properties in the nation. He did the same with the Southern Pacific . . . and worked the same formula on it." His "bold management" blazed the trail for "railroad success in the twentieth century."[102]

And so it was. Harriman insisted on more systemwide management, standardization of procedures and equipment, pooling of rolling stock, and efficiency in moving traffic and handling business matters through the Union–Southern Pacific. Most important, he quickly infused an unprecedented amount of capital into the Southern Pacific, particularly into its aged Central Pacific. Central Pacific routes and portions of other lines were double-tracked, curves straightened, grades reduced, and cutoffs built to shorten tracks and haul times. The famed Lucin Cutoff replaced the original rugged loop in northern Utah by crossing wide and deep salt flats, which railroads had never built on before, and by extending a long causeway-trestle across the Great Salt Lake. The Bay Shore Cutoff eased traffic into San Francisco from its peninsula to the south, and the Montalvo Cutoff shortened the Southern Pacific's Coast Route between San Francisco Bay and Los Angeles.[103] The Southern Pacific, particularly its Central Pacific portion, could now, like its Union Pacific connection to the east, carry more traffic, faster, at lower cost, and more profitably. Altogether, according to Harriman's early biographer, George Kennan, Harriman spent more than $240 million on the Southern Pacific system, including track improvements, additional lines, upgraded locomotives, cars, and steam vessels, and new buildings and real estate.[104] An important example of the cooperative ventures resulting from combining the resources of the Union and Southern Pacifics was the founding of their joint refrigerator-car subsidiary, Pacific Fruit Express. The largest refrigerator-car company, Pacific Fruit Express revolutionized, indeed made possible, the mass shipment of perishable fruits and vegetables and opened the door to new agricultural expansion in California and other western regions served by the Harriman Lines. Operated essentially as a subsidiary of the Southern Pacific, Pacific Fruit Express was headquartered at San Francisco and carried mostly the produce of the Southern Pacific's territories.[105] The period from 1901 to 1913 was certainly a time of consolidation, modernization, and upgrading of the Southern Pacific system, as Hofsommer and Klein have emphasized.

On the other hand, the partnership, if such it could be called, between the Southern Pacific and the Union Pacific was often a troubled one, and certainly more complicated than appears at first glance. In the first place, the Southern Pacific system was not in bad shape when Huntington departed. It had already made great strides in improving facilities, service, and management and was sounder financially than any western railroad, as attested to by rail leaders of the time such as Cornelius Vanderbilt, Chancey M. Depew, William Hood, and William Mahl.[106] Even the vaunted modernization program was not solely, or even particularly, a product of the Union Pacific/Harriman Lines' superior management. Track and service modernization on the Southern Pacific had proceeded apace in the late 1890s, as it had since the 1880s. The post-1901 improvements had been planned and engineered before 1901 by Huntington and chief engineer William Hood and awaited only the raising of capital and res-

Southern Pacific president E. H. Harriman brought west an entourage of sixty company executives and eastern railroad leaders riding in fifteen private rail cars to celebrate the opening of the famed Lucin Cutoff in November 1903. Cheyenne, Wyoming, photographer J. E. Stimson photographed the group. Straddling the right rail is Henry E. Huntington; left of him is the cutoff's planner and builder, head engineer William Hood; to his immediate left is operations chief Julius Kruttschnitt; and second to his left, carrying the coat, is Southern Pacific/Harriman Lines traffic manager J. C. Stubbs. Harriman shepherds his flock from the far right. Courtesy Huntington Library.

olution of the Central Pacific's complicated debt to the federal government. Huntington, indeed, took care of the Central Pacific's debt in 1899, the year before he died. Money for the rail line upgrades had been allocated and equipment purchased, and work on the improvements had already commenced between 1898 and 1900 but was suspended during the period of drift after Huntington's death. What Harriman did do in 1901, after Southern Pacific executives convinced him that the projects were important, was to make the decision to proceed and to provide the funds quickly to restart and speed to completion the Huntington management's already existing modernization plans. It was Hood, then, who directed the construction of improvements. Not only that, in the early 1900s, the Southern Pacific's more modern and efficient engineering specifications were transferred to the entire Harriman Lines system, and the Union Pacific's physical plant was also improved accordingly.[107]

As this suggests, old Southern Pacific executives were themselves important in establishing the new Harriman Lines management. Like Huntington before him, Harriman appreciated the talent of many Southern Pacific men, and in assembling a systemwide management for his rail enterprises, he immediately brought them into top leadership. Among the most important of these was J. C. Stubbs, who took over traffic management of the entire Union Pacific–Southern Pacific system. William Hood, who had started with the Central Pacific during the conquest of the High Sierra, was given charge of engineering and carried out the Southern Pacific track improvements and other Harriman Lines construction projects. William Mahl became comptroller, and eventually vice president, of the Harriman Lines. Julius Kruttschnitt, previously general manager of the Southern Pacific, became special assistant to Harriman and in 1904 chief operating officer of the entire Harriman system. William Sproule, another old Southern Pacific executive, assumed the presidency of the Southern Pacific Company in 1911, replacing Harriman, who had died in 1909. And there were others.[108] The leadership of Southern Pacific people in the formation of the Harriman Lines was true at lower levels as well. For example, the Southern Pacific's Passenger Department, with its flagship promotional monthly magazine, *Sunset,* and staff of editors and writers, provided the talent for the Harriman Lines' aggressive program to increase tourism and economic development in its entire western region.[109]

In most interpretations of Southern Pacific history, the Harriman Lines interlude usually emerges as a time when, under E. H. Harriman's business genius, a vibrant, modern, well-heeled Union Pacific breathed new life into a backward, bankrupt, moribund Southern Pacific. A more apt metaphor would be cross-fertilization. No matter how decrepit its tracks might have appeared to some, the Southern Pacific was not without important human and physical resources of its own. And not just the Southern Pacific benefited from the relationship. The Harriman Lines also gained greatly, and was itself transformed, from an infusion of Southern Pacific people, ideas, and traffic.

Nor did all the Harriman Lines' actions benefit the Southern Pacific. While the lavishing of money on Southern Pacific track and equipment modernization, around which all railroad men and community leaders were likely to rally, was easy for Harriman to facilitate, more substantial policies of business or political import and subtlety were another thing. As could be expected from two bitter corporate rivals of long standing, conflicts of corporate culture, philosophy, personality, and even region erupted when Harriman undertook to impose some Union Pacific/Harriman Lines policies and people on the Southern Pacific. With the exception of executives elevated to Harriman Lines management, the Southern Pacific's middle-level leadership, composed mostly of westerners, remained largely intact after 1901, with the company running much of its own day-to-day internal affairs from San Francisco. In a few cases, to take over some Southern Pacific departments and bring their policies into conformity with Union Pacific's, Harriman dispatched his own eastern people, who often lacked understanding of regional conditions and were condescending if not haughty toward business colleagues and local leaders they dismissed as provincial. Friction was heated, leading old Southern Pacific executives to close ranks to isolate the interlopers, thwart their efforts, and delay, if not defeat, policies that ran counter to Southern Pacific tradition. Sometimes this devolved merely into comic-opera office intrigues, but at other times it could make for corporate disaster.

Such was the case with land-grant policy. Almost immediately after taking over, influenced by his associate in the Union Pacific, William D. Cornish, Harriman sent Charles W. Eberlein from New York to San Francisco to assume charge of Southern Pacific land-grant administration and impose the Union Pacific's approach. Contrary to the Southern Pacific's policy since the founding of the Central Pacific, henceforth, land received from the federal government would no longer be quickly subdivided and sold to small-scale farmers, miners, and loggers to encourage long-term settlement, economic growth, and rail traffic. Instead, the company was instructed to hold its lands so the railroad itself could extract, process, and use or sell its natural resources, especially ores, oil, and lumber, or speculate on higher future prices and profits. Old-time Southern Pacific leaders, including land agent William H. Mills, corporate counsel William F. Herrin, and eventually even Harriman's now-close assistant Julius Kruttschnitt, warned that such a change ran counter to the long-term development needs of the lightly populated western hinterland, violated in some cases the legal requirements of the original congressional land-grant legislation, and would call down the wrath of press, farm, business, and governmental leaders in the West. Ignoring opposition from within and without the company, Eberlein persisted in his ham-handed efforts, causing Southern Pacific people to combine forces and ally themselves secretly to outside interests. They sabotaged Eberlein's authority, eventually sending him packing, and undid or at least ameliorated some of the new Harriman Lines land policies. The basic no-sale rule, however, continued in effect throughout the Harriman interlude, infuriating economic and political groups in California, Nevada, and especially Oregon. In 1907, the state of Oregon got the U.S. Department of the Interior and the attorney general to sue the Southern Pacific in federal court for violating the original 1860s act granting land to its predecessor Oregon & California Railroad. The law required that the land be sold to settlers. In the next decade, the courts and Congress confiscated the remaining portion of the land grant, more than two million acres. The Harriman Lines' loss of the Oregon & California land grant was the largest such defeat by a railroad in United States history.[110]

Finally, unfortunately for his vision of railroad consolidation, Harriman had chosen to assemble his empire during the early 1900s, when anti-monopoly public sentiment was intensifying nationwide. It was also one of those rare times when, under presidents Theodore Roosevelt, William Howard Taft, and Woodrow Wilson, the federal government took seriously its responsibility to enforce anti-trust laws and break up anti-consumer monopolies. In 1908, the U.S. Department of Justice filed suit to dismember the Harriman Lines under the Sherman Anti-Trust Act, passed by Congress in 1890. In 1912, the U.S. Supreme Court declared the Union Pacific's ownership of Southern Pacific stock to be an illegal restraint of trade and, in the middle of the next year, effected the separation of the hitherto competing Southern Pacific and Union Pacific systems. The Union Pacific was forced to sell its Southern Pacific stock.[111]

During the messy corporate divorce, the rivalry and distrust between the old Southern Pacific and Union Pacific managements bore its bitterest fruit. In the breakup, virtually all the old-time Southern Pacific men in Harriman Lines management were pressured, or themselves elected, to return to their former company. While the Southern Pacific was being spun off, the Union Pacific, as it had tried for decades, did its best to detach the Central Pacific and retain that strategic line for itself. As the corporate separation unfolded and Southern Pacific people discovered what the Union Pacific had in mind, despite their continuing positions of responsibility with their parent company, they became determined to keep the Central Pacific. This became especially vital when the U.S. Attorney General insisted as part of the settlement of the court case that the Southern Pacific sell its stock and give up its lease of the Central Pacific. Harriman Lines bosses initially forced the old-time Southern Pacific men to acquiesce in the loss of the Central Pacific, maintain public silence, and sign a damaging agreement relinquishing the lease, granting to the Union Pacific the right to buy the Central Pacific's stock, and conceding trackage rights for the Union/Central Pacific over Southern Pacific lines.[112]

Privately, the Southern Pacific men seethed. Severing the Central Pacific would cut out their railroad's traditional heartland in central and northern California, exclude it from most of San Francisco Bay, strand its Oregon system, and put it at a severe traffic disadvantage vis-à-vis the Union Pacific. The weakened, truncated railroad might not survive on its own.[113] First, in late 1912 and January and February 1913, they worked quietly within the Harriman Lines to get the Union Pacific to drop its proposal, or at least to modify the terms of its takeover of the Central Pacific along more favorable lines. When that failed, they became more aggressive. After privately debating among themselves how to proceed, Southern Pacific leaders concluded that the likelihood of keeping the Central Pacific was greater if they defeated the Union Pacific immediately, during the breakup. They could then take their chances later in the federal courts, while defending against the Justice Department's expected lawsuit.[114]

To stop the "mutilation" of their company, Southern Pacific men secretly encouraged and fed inside information to allied outside parties. They helped western newspapers, shippers' groups, and the state of California mount an effective campaign against the Union Pacific's scheme. Particularly, they enlisted the aid of the California State Railroad Commission, which had to approve several elements of the agreement. Convinced the transfer of the Central Pacific would hand the Union Pacific monopoly power over the state's transportation, the commission opposed and delayed the transfer of the Central Pacific until after the formal dissolution of the Harriman Lines.[115] After the Southern Pacific finally was freed from Union Pacific control in February 1913, and more especially after the Supreme Court's final order in the late spring, President William Sproule broke the silence and announced to the press that his company had agreed to give up the Central Pacific only "under duress" and that it would now resist the Union Pacific's threatened takeover. The Central Pacific, he announced, was "not for sale at any price." Moreover, he told an Oregon newspaper in September, the Southern Pacific had been "an unwilling partner" to the Harriman Lines merger in the first place and had always resented being controlled by Union Pacific outsiders.[116]

After the formal separation of the Union and Southern Pacific companies, the U.S. Attorney General retaliated by filing suit in early 1914 to force the Southern Pacific to sell its stock in the Central Pacific. The case dragged on through the early 1920s, with the company retaining control of the Central Pacific and the Union Pacific working behind the scenes to seize the line. Finally, in 1922, the Supreme Court ordered the lower court to strip the Southern Pacific Company of its subsidiary. Before the decision could be carried out, however, the Southern Pacific, under the Transportation Act of 1920, which in this instance superseded the Sherman Anti-Trust Act, applied to the Interstate Commerce Commission for permission to continue controlling the Central Pacific through stock ownership and lease. Chambers of Commerce, shippers' groups, and government agencies throughout Southern Pacific territory supported the petition. Despite the Union Pacific's campaign to block it, the ICC approved the application as "in the public interest," and federal courts accepted the decision.[117]

The Southern Pacific Reborn

Made whole, the Southern Pacific Company regrouped during the "unmerger" crisis and reestablished itself as a major, independent carrier in the Far West and Southwest. Initially in 1913, corporate headquarters remained in New York City, where it had moved during the Huntington presidency. Operations continued to be conducted from another office in San Francisco. In 1917, upon completion of a spacious building prominently placed at the gateway to downtown, across from the Ferry Building at the foot of Market Street, the Southern Pacific's headquarters returned to San Francisco, where it remained into the late 1990s.

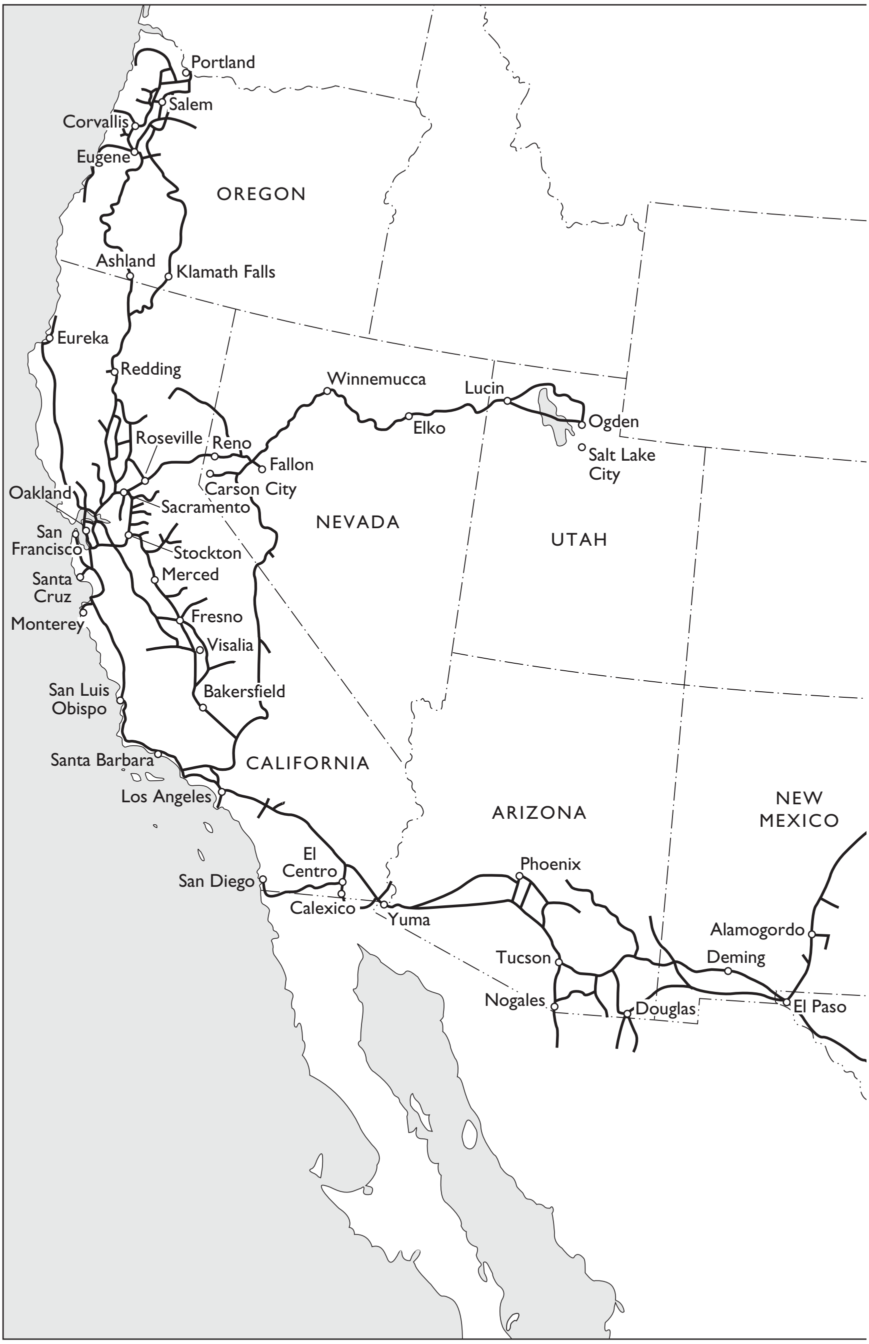
Major additions to the Southern Pacific system continued to be made in the early twentieth century, during and after the period of Harriman Lines domination. The company first subsidized the San Diego & Arizona, then acquired the line in 1916 and completed it from San Diego east through rugged country to meet the Southern Pacific Railroad in the Imperial Valley, finally giving the company access to the port city of San Diego.[118] In 1907, the Southern Pacific jointly with the Santa Fe formed the Northwestern Pacific Railroad and by 1915 had pushed it from the Marin County ferry terminals across the Golden Gate from San Francisco, northward to California's northwest redwood coast ports.[119] In 1924, the Southern Pacific bought the strategic El Paso & Southwestern Railroad, which brought with it an important regional water system. The El Paso & Southwestern also connected the extreme southern Arizona and New Mexico mining districts to the Southern Pacific mainline at Deming and El Paso and on to Chicago via a Rock Island Railroad hookup at Santa Rosa in northern New Mexico.[120] The company also expanded its Mexican holdings. In 1909, it reincorporated the Sonora Railway, which ran south of Arizona, into the Southern Pacific de Mexico, and began extending its mainline south from Guaymas along the Gulf of California coast, and simultaneously northward from Guadalajara. Suspended for more than a decade during the Mexican Revolution, construction was finished in 1927.[121]

In the spring of 1915, a great world's fair, the Panama-Pacific Exposition, debuted in San Francisco. As part of its support for the city's rebuilding after the 1906 devastation by earthquake and fire, the Southern Pacific Company had made the largest private business financial and administrative contribution to the fair. The imposing Southern Pacific building, seventy feet in height, with soaring galleries, symbolized the company near its pinnacle of early twentieth-century reach, power, and diversity. Visitors entered through a tunneled section of a California redwood tree and filed past scenes depicting the best-known places within reach of the company's lines through eight states—Yosemite Valley, Lake Tahoe, Crater Lake, Mount Shasta, Santa Clara Valley orchards, the Monterey Peninsula, the Santa Barbara Mission, Catalina Island, Riverside County orange groves, Nevada's Truckee-Carson Reclamation Project, Arizona's Roosevelt Dam and cliff dwellings, San Antonio's Alamo, and a Louisiana plantation on Bayou Teche. Inside the galleries, to re-create the atmospheres of its many hinterlands, the railroad mounted displays of cities, landscapes, soils, trees,

Southern Pacific Company building at the Panama-Pacific Exposition, San Francisco, 1915. Author's collection.

and the produce of farms, mines, factories, and lumber mills. The Sunset Theater, seating 350, featured round-the-clock slide lectures on the resources of California, Oregon, Nevada, Utah, Arizona, New Mexico, Texas, and Louisiana. On opening day, at least, all appeared forgiven. Eight thousand Southern Pacific employees attending the building's dedication on March 10 cheered welcoming speeches thanking the railroad for its support by anti–Southern Pacific mayor James D. Phelan and a representative of anti–Southern Pacific governor Hiram Johnson. The Big Four, as well as E. H. Harriman, were honored for their roles in building the West, and executives of the Southern Pacific and the Union Pacific sat together on the stage.[122]

Only a few years free from its Harriman Lines bondage, the Southern Pacific Company's transportation network remained the largest in the world. Its Pacific System alone consolidated an astounding 160 separate predecessor companies under one management by 1916, with dozens more in the Atlantic System.[123] Upwards of fifteen thousand miles of steam railways crisscrossing eight states and Mexico, in addition to untold numbers of ferries, streetcar and electric interurban lines, buses, international steamship routes, and more, traversed landscapes that ranged from cities to farms, from rain forest to desert, from below-sea-level sinks to many-thousand-foot mountain passes, from the Pacific to the Atlantic. Much Southern Pacific trackage had opened up thinly settled,



The Southern Pacific Company's rail system, 1924. Adapted from Southern Pacific Company, *Forty-First Annual Report of the Southern Pacific Company and Proprietary Companies . . . , 1924* (1924). Courtesy California State Railroad Museum, Sacramento.

Chicago
Tucumcari
Denison
Fort Worth
Dallas
Shreveport
TEXAS
LOUISIANA
Waco
Lake
Charles
Baton
Rouge
Alpine
Austin
New Orleans
Houston
Del Rio
Morgan
City
San Antonio
Galveston
Eagle Pass
Port Lavaca
Morgan Lines S.S.

undeveloped land, some of it virtually unpopulated. The trains brought people, farms, towns, factories, resorts, parks, and universities. Not just the incidental fact of its construction, but also the railroad's purposeful actions shaped land use and tenure, agriculture, irrigation, produce-marketing, resource conservation, and the preservation of natural landscapes. Nary a square mile escaped the railroad's influence. The transformation wrought by the Southern Pacific over its territory is one of the great untold stories in the history of the American West.